

The background of the cover is a vibrant red. In the center, there is a collection of Fujifilm photography equipment. A large, black Fujifilm X-Pro3 camera with a black lens is the most prominent object. To its left, a smaller Fujifilm X-T4 camera is visible. In the foreground, a Fujifilm X100V camera is partially visible. A black leather strap with a silver buckle is draped across the bottom of the equipment. The text is overlaid on this background.

AUTHOR

Ken Wheeler

Fujifilm Camera Helpful Tricks & Tips

3rd Edition

Now including

X-Pro3

X-T4

X100V

Helpful Tips for Fujifilm Camera Owners

Fujifilm Camera Helpful Tricks & Tips

Helpful Trips for Fujifilm Camera Owners

by: Ken Wheeler

3rd Edition April 15 2020

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Cover image taken with X-H1 and 8-16mm using a Godox AD200

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Email contact: neoplatonist@icloud.com

Published & authored by Ken Wheeler



LUX ET VERITAS

ISBN: 0-9712541-9-2

ISBN13: 978-0-9712541-9-0

Seven product images within provided courtesy of Paul C. Buff Inc.

This book is not sponsored by nor endorsed by Fujifilm Inc. in any way

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Published in the United States of America



PLEASE NOTE! All cleaning, care, etc. tricks & tips within this booklet are most ideal and or factory recommended methods. It is obviously so the case that reading within, many people can and will say: “[well I do it a different way and it also works just fine...](#)”.

As it necessarily follows that there is often MORE than one way to achieve the same result, is it also true that that way may not be the best, quickest, or most safe way to achieve the desired result. Therefore the most ideal, safest, and best recommendations within these tricks & tips are the ones suggested in most all cases.

Additionally camera setting tips & tricks may not be [your](#) well-established methodology (such as perhaps shooting mostly shutter priority etc.); however the camera settings shortcuts and tips are meant & implied as suggestions to think about and possibly try since they cut time & effort, such that you can concentrate on the shot more and your camera less, which is always extremely helpful.

Further, some or more of the tips & tricks in this booklet might be obvious to a seasoned Fujifilm camera user, however I can promise there are plenty of tricks herein to be of aid to even the most seasoned user. It is the case, obviously so, that many of these tricks are cross compatible with other camera systems, such as cleaning tips & other tricks.



INTRODUCTION

This is a “meat and potatoes” unassuming book (larger than I planned it being!) on Fujifilm Tricks & Tips that everyone can get something from...everyone. At the very least it will save you time and money on lens recommendations and great gear & accessories. At its best (depending on your skill levels) there are tons of time saving tips in the sections of this book to help you shortcut and learn how to use your Fujifilm camera & its systems. I did not even try to make this book fancy in appearance or in its contents, because that is neither important nor a good use of my time which is very limited. There is a lot of “pretty garbage” out there to read. I care about content alone. Further more, as of now I’m the third person ever to write a book on Fujifilm camera systems, and I did not want to do anything even close to what the others have done, which is mostly rehash and pontificate on the camera user manuals. To do so is a disservice to the reader. Every Fujifilm camera owner should read and re-read their user manual. This book’s contents are meant to be mostly about the things not in the user manuals!

This is not the last edition, its merely the third edition. However menu systems across Fujifilm cameras are about 95% identical and the menus section is useful for everyone. However at the current size of this book, I cannot add everything in the 3rd edition. **Why not?** Why not just wait and put everything in it and publish it a few months later? Because I’m writing this, and it’s free, and importantly this is how I like to write, one big section at a time, or in this case edition. I like writing books in editions, in this case I have the skeleton, the organs and eyes of the book, I will put the finer skin and hair extreme details within this book in the 4th edition very quickly afterwards. Likewise new-release cameras as well.

Ultimately learning these tips & tricks will let you understand the camera much better which lets you “forget” your camera and focus on your shot which is the most important thing. A camera need be like our legs and breathing, we just do it, we don’t think (rather we shouldn’t) about it.

I know for a fact some people will complain and scoff about the gritty images in this book, and I have to say that there are “*those that do & those that talk about those that do*”. It’s so easy to talk and so hard to do. I could have taken 20X as much time to take detailed pictures of 100s of different little things, but that in no way helps the contents of this book, admittedly 98% of the images (other than the photo examples) were taken with my phone! Why? Because I wanted to spend my precious time on the contents rather than images of SD cards and sensor swabs! Further more I am not, nor have I ever pretended to be a “video guy” and both personally do not care about video (much at any rate), nor have included such tricks & tips herein; *sorry for that, ...maybe, well not really.* Aaaack!

The table of contents for this book is found within the PDF BOOKMARKS of this digital file.

Translator, photographer, author, expert in field theory, metaphysician, & tattooed monkey

~ Ken Wheeler

This book IS FREE, however if you like it, a *suggested \$5 donation* is resoundingly welcome at paypal:

kenw111@insightbb.com

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FUJIFILM GENERAL TIPS, TRICKS & GEAR RECOMMENDATIONS

WHAT FILE SIZE & TYPE?

The easiest question to answer for all Fujifilm cameras: **1. The LARGEST FILE & SIZE POSSIBLE. ALWAYS. 2. Lossless compressed always. 3. Film simulation STANDARD. 4. Color space SRGB. 5. Always FINE+RAW (see tip below). 5. Sensor saturation.**

I want the most from each and every file to have as much elbowroom in post production as possible. To shortchange myself and the high performance camera I purchased by even thinking of doing less than this is like putting wooden wagon wheels on a Lamborghini. SD cards are cheap and plentiful, so there is no such thing anymore as space concerns. Under an extremely rare instance where there is extreme high action a photojournalist might consider for sake of long buffering to shoot FINE Jpeg only, but that is it. RAW all the time 24-7-365. I want every last drop of juice my camera can squeeze into a RAW file so I have the most to manipulate with the most latitude in Capture One (or Lightroom) and this also means shooting sensor saturation (ETTR) as much as possible, and always consciously (see tip below).

Honestly I roll my eyes at the little online guides and more in speaking endlessly on Grain effect, Dynamic Range, Highlight Tone, Shadow Tone, Sharpness, Noise reduction settings in-camera & more. **Why? Keep it simple!** If you shoot the largest files, sizes, and RAW and religiously perform sensor saturation (see tip below), everything else is irrelevant as per the data the camera writes to your cards. You have tasked your camera to drop the absolute maximum amount of information into a RAW files which you will edit to your hearts desire a million different ways on your computer.

All digital camera philosophy should be this immutable rule: **Maximum information possible to a RAW file with sensor saturation exposure & dual card redundancy.** It's just that simple, your computer and its RAW editors are the masters of noise, grain, & HDR dynamic range extraction, bothering over such things via your camera is a waste. The oldest computer is 100X better than the newest camera in image manipulation, processing, & development! Your job is to deliver the maximum amount of information possible on the card(s) to edit as you see fit. Of course photography is an art in more ways than one, so experiment and see what you like; as for film simulation I shoot Provia/Standard on everything. I make everything the way I want in my computer.

KNOW YOUR FUJIFILM CAMERA DIALS AND BUTTONS BLINDFOLDED!

In addition to reading your manual over and over while sitting down with your camera you need to know every button and dial on your camera and know where it is without even looking. The less you need to focus on your camera the MORE you can focus on your shot and composition. But please, do NOT EVER remove the dials as seen in the image below posted for some lite humor!



IT HAS TO BE SAID. DEAR HEAVENS, PLEASE READ IT

80% of the questions I get could have easily been solved if the user had read their free downloadable user manual from Fujifilm. This book of mine is meant to cover everything these manuals DO NOT cover and greatly emphasize and explain the many things they do not. This is after all the Tricks & Tips book, not the “stuff you can also find in your user manual book”.

I'm damned if I do and damned if I don't, no matter what I do however. If I covered too many things in the manual people would say “all he did was rehash the stuff from the user manual in his book!”; and if I covered too few things mentioned in the manual people would say: “he never mentions the important things from the manual in his book!” Such is life!

You can find the Fujifilm user manuals here:

https://www.fujifilm.com/support/digital_cameras/manuals/



FUJIFILM PEEPS SHOWING THEIR LOVE OF THE SYSTEM! I WROTE THIS BOOK FOR EVERYONE

By the way, I got full permission from all these wonderful folks to post their images below they created for this book! I appreciate the feedback for version 1 & 2 received, and I keep expanding this book to cover new cameras and new tips, but the people below (and many more!) were asked to show their appreciation for the Fujifilm system, and post an image of themselves with their favorite tool, and here are just a few of them (I could only post just so many, I'm sorry!). I myself love to teach things and be helpful, and these along with so many more have been kind and thankful and told me what to add to this book, and I appreciate their feedback! Go Fujifilm! My favorite camera system and company hands down! Thanks for all the personal selfie & camera submissions for insertion within this book.







VERTICAL GRIP & WHY?

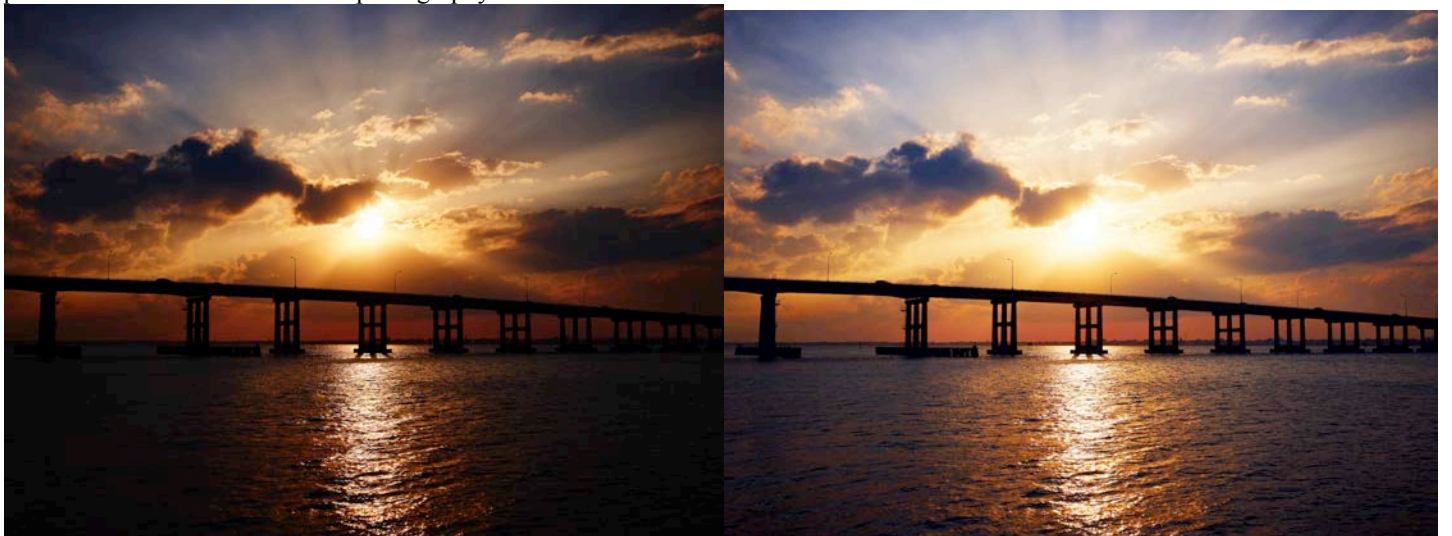
This is greatly subjective, but I grew up on vertical grips, and the extra weight actually help steady the camera, in addition to having a portrait orientation shutter release and joystick; not to mention more power. In the case of the X-T2 & X-H1 you need the grip for boost mode and other extra features.



SENSOR SATURATION (ETTR) SOLVES ALMOST EVERYTHING

Well, I wanted my final shot to look like the image on the left, mostly dark and dramatic, but I exposed it thru the EVF as it appears on the right. However If I followed the pitfall of WYSIWYG EVF “metering” and dialing in what I SAW, I would be robbing my shot of the maximum amount of information and this is fundamentally both wrong and a problem. More information is always better, and nobody here is talking about blowing any highlights, rather getting as much information to both the midtones and the shadows as possible. 90% of people would choose the “exposure” on the left in their EVF or LCD and take the shot, and this is wrong; this is not exposure but final image.

The final image must ALWAYS be achieved in your computer, not your camera! Saturate in your camera, and “expose” (as you desire the shot to look) in your computer. Remember that, and repeat it! Exposing the image as seen on the left robs much of the tonal details from the shadows and midtones from ever being recovered, even with a high DR camera like the GFX50R this was shot on. No camera made can recover what was never captured to begin with. This fact of exposure is incredibly important and a pitfall of WYSIWYG mirrorless photography.



SHOOT FOR THE HIGHLIGHTS? OR SHOOT FOR THE SHADOWS? CLEARING UP ALL THE NONSENSE

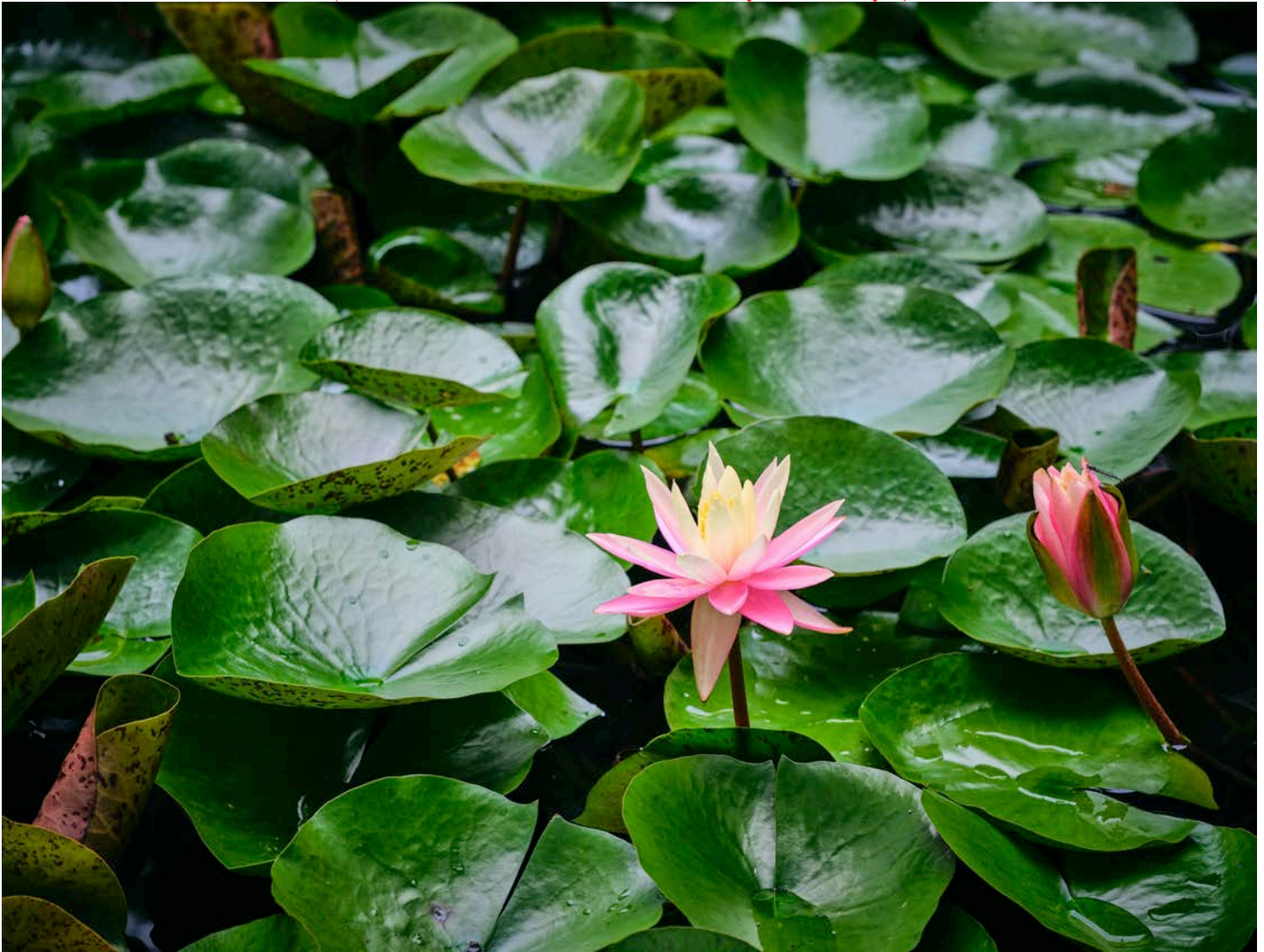
All post-production software suffers the same issue, that being that there is a lot more room for recovering (or bringing to light the detail thereof) shadows and smoothing that noise than there is for recovering blown highlights, a LOT MORE. In short, you can raise something up pretty easy, but its basically impossible to pull back what has already “spilled over” the ‘cup’ (blown highlights). There are countless fools debating each other in the photography world about what to do, expose for the highlights, or for the shadows? The answer is to forget both of those, keep it simple, and saturate the sensor as far as possible without blowing the highlights.

The shot below with the GFX100 required a bit too much under-saturation of the shadows to prevent clipping the white/pink flower and its details (not much detail regardless!). Do the highlights matter? In the case of the sun and surrounding clouds, no, not really, that’s what high key photography is! Suffice to say in the shot below I had to pull up (push) the shadows in the lily pads by nearly 2 stops such that to keep from clipping the flower detail. Regardless I saturated the sensor to the max, but the dynamic range of the shot was extreme such that the high reflectance of the whitish flower was beaming a lot more light than the lily pads.

People don’t realize that in digital photography **exposure is NOT DONE IN THE CAMERA, rather ON THE COMPUTER!** *What? HERESY!! Everyone knows the main goal of the camera is to EXPOSE THE SHOT!!* Not so, a digital camera’s MAIN GOAL or JOB (other than your desired lighting, the ratios thereof and your composition etc.) is to gather AS MUCH INFORMATION as possible so you have AS MUCH INFORMATION AS POSSIBLE to work with and expose the shot AS YOU SEE FIT on your computer.

This is why WYSIWYG mirrorless photography leads to enormous amounts of under saturated FLAT damn images with gritty shadows and lack of tonal range in the rendering, especially the low gain (bad SNR) intertonal details.

When you under saturate an image IN CAMERA it’s the exact same thing as snipping 10 inches off your car antenna for radio signal reception. You’re literally cutting out the SNR GAIN of the antenna which has the same net effect as trying to tune in a far off radio station and getting static and poor sound fidelity!! EXPOSURE OF AN IMAGE IS NOT PERFORMED IN YOUR DIGITAL CAMERA. (Some will not understand this and still cry out “Heresy!”)



100% OF YOU ARE HOLDING YOUR CAMERA TOO TIGHT, TOO MUCH, TOO WRONG!

I can shoot without IBIS or OIS usually better than someone else with a normal “grip” on their camera can WITH both of those turned on. What’s the deal with that? Am I bragging? No, in fact I used to give archery lessons and target shooting lessons, and LESSON 1 was to tell people to take the ***#@&%(@!! DEATH GRIP OFF** their Bow / Firearm!! I ALWAYS improved peoples accuracy, ALWAYS.

If you watch (youtube search a video of same) professional marksmanship with Bow & Arrow shooting at targets far off, you’ll notice that NOBODY has their hand wrapped AROUND their bow, NOBODY! They have the mostly unmoving interior of their PALMS pressed against the bow with OPEN fingers. Every single idiotic book or youtuber, or image online shows someone with their entire hand making contact with the camera and usually the other one also, ARGHH!!!! This is counterproductive in the extreme, all you’re doing is having an enormous amount of muscles fight each other and jerk the camera around 1000 different directions while trying to take a shot.

How should you hold your camera? Well there are many superior ways and using a handstrap really helps a lot to get your hand OFF the camera because you’re holding the camera via the back of your hand pressed against the handstrap mostly. But in truth, the best analogy would be, how would you move a \$10,000,000 Fabergé egg from one room to the other? Enough contact and pressure so that it would never drop, but absolutely you wouldn’t meat-fist hold the thing like a 20-cent potato you’re about to toss in the stew pot!!

Other extremely useful tips are to ONLY use your fingers knuckles to support the lens, bone on lens, no muscles! **Again, do NOT “meat-fist” grip the lens as if you were trying to strangle a rabid weasel to death.** I see endless people with their hands wrapped around the lens and this is insanely ignorant and wrong.

MAKING YOUR MAGIC MANIFEST

When I am out and about, I see people everywhere fighting with their cameras, or taking portrait shots in the shadow and not a speedlight to be seen. The golden rule is the more you know your camera and the less you have to look at it (not to mention “fight” with it) the more you get to enjoy photography itself. Every hour spent learning your camera translates into countless more hours spent enjoying your photography rather than looking in confusion at your camera wondering HOW and WHAT, such as “what did I just do wrong?”



YOUR BIGGEST MISTAKE!

Unfortunately nearly 100% of everyone makes this awful mistake. Best camera and lenses, but NO consistency in image display for post production. My rule for countless things in life is A.R.C., absolute repeatable consistency. If you have a high resolution camera (ALL cameras today!) but you cheap out on a display to view them and importantly edit them, you're doing yourself an incredible disservice and committing an outright SIN if you edit your images on such a poor or **poor AND uncalibrated** display and deliver that product to the client!

You cannot edit a shot on a less than high resolution display, much less correct for kelvin white balance etc. on and on. **It's unforgivable to even THINK high resolution imagery in digital photography as being 99% camera, lens and lighting! At LEAST 30% of that or more is in your DISPLAY used to edit those shots and display them.** You can no more edit images on a junk display than a blind person can fly an airplane.

I don't care if someone uses a Mac or PC, but for heavens sake get a very HIGH resolution quality display. See for example: <https://www.eizo.com/solutions/graphics/>



**RESOLUTION
CALIBRATION
CONSISTENCY**

HOME CASES FOR YOUR LENSES

I use mostly Pelican and cheap Pelican knock-off cases for my lenses (that you can see in the background), but once in a while I want something more fancy for my better lenses, such as this all aluminum Zero Halliburton case that I bought some foam for, all acquired on Ebay very cheap. This is a nice snug home for 4 of my GFX lenses.



LENS CASE OPTIONS

Unfortunately Fujifilm does not include a formal case for any of their lenses except for the 200mm f2. However cheap used options are easily found on Ebay, I buy for about \$5 to \$10 each, lens cases made by Nikon for some of their lenses, they exist in several different sizes. Below is a perfect example, I have a snug little case for my 8-16mm Fujifilm lens. This is a CL-M3 case.



FOCUS PEAKING OPTIONS

Useful not only with Fujifilm native lenses but especially so with adapted older MF lenses, focus peaking highlights the sections that ARE in focus, you have the choice of either RED, YELLOW, BLUE, or WHITE (also split screen and digital prism on the X-T3), additionally both LOW and HIGH intensity settings for each color.

Also, you can set AF+MF (turn it on to use it) in your Fujifilm camera such that you can autofocus normally, and at half-press (in single AF mode) and upon achieving autofocus lock, you can then override the cameras autofocus and fine tune the focus as you see fit at which time the peaking highlights (whichever color you pick, and intensity) will pop up to give you the info as to what is in focus as you dial the lens AF ring. Autofocus is not a manual linkage in Fujifilm cameras, rather is "autofocus by wire" (i.e. electronic). This peaking is (not opinion, but fact!) the VERY BEST of among any digital camera system! Further more using very shallow depth of field lenses, f1.4, f1.2, f0.95 etc., this peaking system makes focusing very accurate and a joy to use.



WHITE BALANCE REAL-WORLD USE & PRACTICAL REALITY

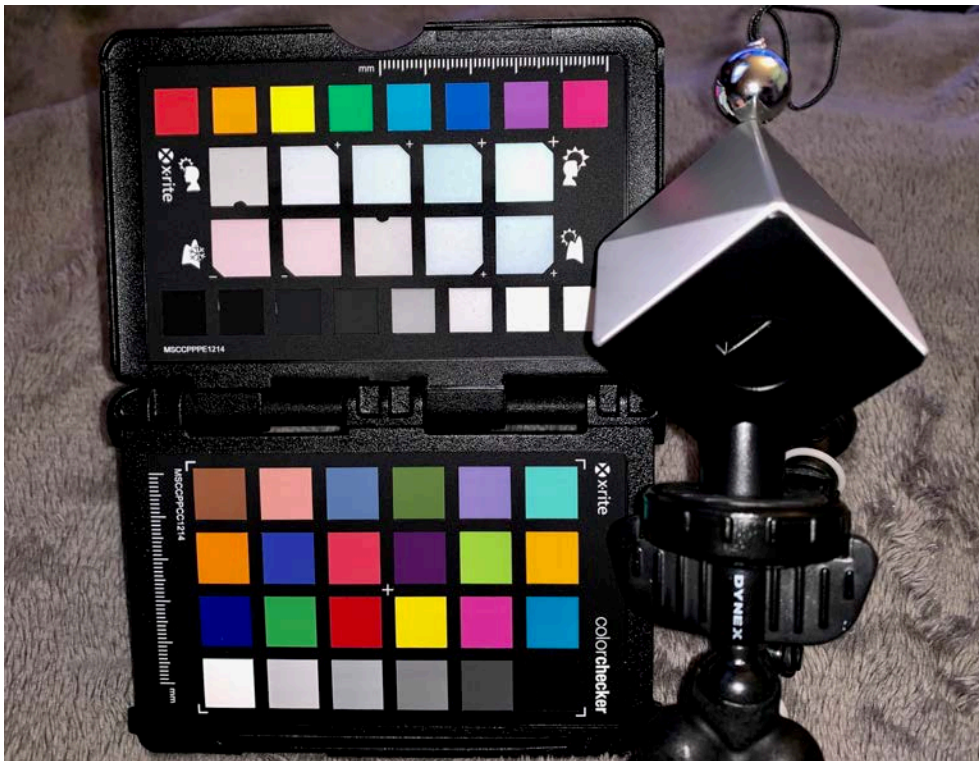
Many people get in a bothered state stressing over white balance, and sometimes this is called for but in most cases it is not. All photography is a lie and we set the tonality and mood to match what we want to see and or for others to see. Heck, each lens made renders a different tonality, usually cyan shifted, or red etc. Unless its product photography, high fashion, reproduction, or weddings, and high end portraiture, it's not a concern. The fact is you will see far fewer people with a color checker passport being used on a photo shoot than you will a person with a light meter. That is to say "almost never" a meter and even fewer with the color checker.

But consistency is all-important I am all about the importance of consistency; variable elimination makes everything easier in post production, a LOT EASIER! Below you can see the color checker passport on the left and the Datacolor SpyderCube on the right. As you can see from the 2nd and third row down from the top you can choose a warming or cooling patch to change the mood of your shot. All of this goes without saying that you need to have (and often) your monitor color balance set! Consistency is paramount and the real world use of the passport is in: 1. Product photography 3. Wedding ceremonies 4. High-end portraiture 5. Reproduction (taking photos of, for example, a masterpiece painting etc.) for perfect reproduction and representation of color and tonality.

How would you use the passport? Simple, before taking the primary shots you hold (or have your subject hold it up) the passport under the lighting to be used and take a reference shot and then you color correct all subsequent images taken after under that same lighting using that first image as a white balance reference during post production. In the case of the wedding ceremony you would, before the ceremony, place the passport in the lighting to be used, take the shot, and use that as a white balance reference during post production in either Lightroom, Capture One etc. to color correct all the shots with proper white balance.

But what is PROPER WHITE BALANCE? You can perfectly balance all your wedding ceremony shots, but all those little tonal patches on the color checker passport are for warming or cooling the scene to set the mood and desired output of the shot. Photography is NOT about reality in most all cases, it's about what you want to produce and see or what others pay you to produce. No homely person has ever paid a photographer to make a portrait shot that looks REAL! If you want hard and fast truth, become a rocket scientist or a mathematician. Real estate photographers don't use wide angle lenses to shoot interiors to show reality, but to make small rooms look huge so people will buy the property. Photography has never been about reality, in general.

Nobody however wants magenta skin tones, or green children from florescent lighting. Consistency is important & color balance can be very simple but people love to complicate things far too much. Most professional things in life are about perfect control, consistency and a perfect frame of reference. Like the North Pole for a compass used to navigate. The color checker is that "North Pole" fixed reference point. That's exactly what it does and is made for in professional paid photography.



MY RECOMMENDED BOOKS ON PHOTOGRAPHY!

Wow oh wow! How many times do I get asked about this, “what are your top recommended great books on learning photography?!?”. Easy answer there, and let me tell you what, I’ve seen more and own more books on that topic than anyone for sure, and I have a short list, and alas many of them are written by one guy! But not all. Here is my very short list of MUST BUY books to make EVERYONE happy, whether unskilled or skilled alike! I am certainly NOT about reinventing the wheel, if there is a great book out there, I recommend it rather than writing the same darn thing again myself. These 16 books are the best of the best of the best.

Books by the author Michael Freeman:

Capturing Light

Perfect Exposure

The Photographer’s Eye. Composition and Design

Low Light Photography Field Guide

101 Top Digital Photography Tips

Photo School - Exposure

The Photographer’s Mind

BOOKS BY OTHERS:

Exposure Basics by David G. Praker

Off-Camera Flash by Ron & Robin Deutschmann

The Practical Zone System by Johnson C.

Strobist Trade Secrets Volume 1 by Zeke Kamm

Strobist Trade Secrets Volume 2 by Zeke Kamm

Speedlights & Speedlights by Lou Jones

This is Strobist Info by Dustin Diaz

The Flash Photography Field Guide by Adam Duckworth

Flash Techniques for Macro and Close-up Photography by Ron & Robin Deutschmann

SET THE LIGHTING RATIOS THEN SATURATE THE SENSOR. CAMERA SATURATION, COMPUTER EXPOSURE

Of course in the images below left and right we are not speaking about any flash photography, rather ambient with, in this case, extreme dynamic range between the highlights and the shadows. But the principle also applies to flash photography just as much as it does to ambient. Lets say for sake of rendering, you want the final image or print to look like the shot on the left, mostly dark and brooding, with only the highlights in the true tonality. This is the mood you wish for as final result.

The problem begins when people put the cart before the horse and try to set the lighting ratios and sculpt the light thru sensor under saturation. This is the evil of mirrorless WYSIWYG which makes people lazy. The LCD display on the right with 2/3 stop+ compensation will yield MORE INFORMATION in the final RAW image than the -3 stop shot created on the left. When you under saturate you rob both highlights all the way thru to the shadows of both detail and tonality, leaving you with LESS information to render the best looking shot in post production.

The correct method is to sculpt the light as you see fit (for flash, not this example) and then saturate the sensor (ETTR). I will take the shot as seen on the right EVEN THOUGH I want the final rendering or print to look like that seen on the image at the left. When you rob the RAW file of sufficient saturation, you rob the ENTIRE SCALE of the RAW image of sufficient detail, tonality, nuance and gradation, that includes, highlights, mid-tones, and absolutely the shadows. But who cares right? You want the shadows to be black or mostly so, yes? It makes no difference, you're only introducing noise and "mud" into the ENTIRE SHOT CAPTURED.

Current digital cameras do not expose highlights ONE way and shadows ANOTHER way. **More information is ALWAYS MORE BETTER. Saturate in your camera, and expose as you want it to be in your computer!** All this hinges on the fact that you KNOW and LEARN the dynamic range of EACH SPECIFIC camera you use such that you do not clip the highlights.



PROGRAM, APERTURE PRIORITY, SHUTTER PRIORITY, & MANUAL

Fully automatic is the antithesis of control and the purchase of a professional camera in premise. I do not recommend shooting program at all unless it's a stepping-stone for a new camera user until they familiarize themselves fully with the controls of their Fujifilm camera. I, like most, shoot aperture priority 95% of the time and subconsciously keep check to have as low an ISO as possible in order to get the shot. Especially since ISO is not part of exposure, rather is applied gain. I prefer full control over my aperture and keep in the back of my mind when I'm reaching the brink on shutter speed and shake issues due to lighting insufficiency.

I love to use manual adapted lenses, old and new, Zeiss and great old bokeh lenses but I likewise still shoot aperture priority and manually control my lens apertures. Manual exposure is best for product photography, absolute control in studio strobe use where you would not dream of anything other than manual. For events I shoot (as I have found personally to be the fastest and best) all manual with TTL speedlights and speedlight flash compensation via my flash menus I have set with a function button (really very important you assign a function button for flash control interface). Much your choice is subjective and composition or action dependent.

RECOMMENDED VIDEO MICROPHONE & HEADSET

Usually tiny microphones and earbuds are pretty junky, however for compact video recording, I have found nothing better than the Sony MDR-EX15LP headphone earbuds for about \$10+ on ebay and the (actually made in Australia!) Rode VideoMicro Compact On-Camera Microphone. An incredible microphone anyone would be so very happy with, average cost is \$60. You cant go wrong with this tiny duo for recording some nice video on the small and cheap!



TO DIAL OR NOT TO DIAL

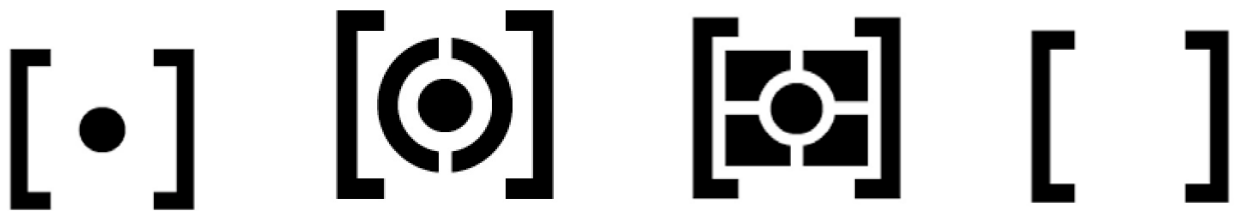
I have to be honest, I actually LOVE the “old school” dials on Fujifilm cameras, however I am also pretty lazy! As you can see from the image below (see also tip in menus section) I have A set to both ISO, Shutter, and C set on exposure compensation dial. With this configuration and another setting in my menus I never need to touch any of these dials at any time, I click and or click again to switch between ISO and exposure compensation via my front command dial just below the shutter release. Many new Fujifilm users or onlookers think, upon looking that “that’s too many dials, ughhh!” but the truth is you can customize your Fujifilm any way you want, if you want to spin dials all day, fine, if you NEVER want to turn them like myself, you can do that too!



METERING

Most professionals know the DR of their camera and with ambient light use matrix (in this case called MULTI by Fujifilm) metering all the time and merely dial in + or – exposure compensation because there is mental intuition of the nature of the shot and how and when such metering always fails (and all metering fails). However if you know the DR of your camera, you can spot meter the highlights and open up “X” numbers of stops to induce sensor saturation and get the most information out of your shot possible for post production. In Fujifilm’s center-weighted metering, the camera’s reflectance metering calculation takes the entire frame into consideration but weights the exposure to the center of the composition.

On average, the camera takes the totality of light and averages it. Honestly most professionals are shooting Multi (matrix) most of the time (with ambient lighting!) and dialing in exposure compensation based on the scene and lighting (such as snow, which confuses all meters, or in the case of heavily backlit subjects, using spot metering and basing exposure off the chosen subject. There is a natural skill to seeing the lighting of the composition and changing the compensation everyone must develop over time. Soon you’ll subconsciously know that “X” scene is throwing off the meter and you will dial in exposure compensation.



REFLECTANCE METER (YOUR CAMERA) & INCIDENT METER (LIGHT METER)

As you can see my Sekonic 858 incident light meter takes utterly no accounting of the different reflectance values of the black avocado or the white onion. Every meter in every camera is a reflectance meter and every camera's job is to take whatever it sees and expose it to 18% grey (see tip below). There are entire books dedicated to teaching you to see how your camera sees and how to compensate for it.

When you learn how your camera's reflectance meter works, WHY it fails and WHEN, you will develop a natural intuition about compensation. You should be using your compensation exposure very frequently as do all professional photographers for ambient illumination.



X-MOUNT WEDDING ‘TRINITY’ OF LENSES (Yes, I know there are 4 lenses pictured!)

My definite pick, these four lenses for wedding use with an X-mount camera(s) (always have a backup camera, preferably also using with your 2nd most used lens mounted on it so you don't have to switch out lenses back and forth on one camera). **That being the 8-16mm, the 16-55mm f2.8, the 50-140, and lastly the 80mm 2.8 macro.**

Why the macro “4th lens” you will surely ask? Nothing makes wedding portfolios more complete than macro shots of the wedding details, the rings, the cake, the dress lace, and all the tiny details the guests remember, these carry as much memories or more as ANY portrait shot of the ceremony or reception. You could take a fifth, that being the 56mm 1.2 for bride and groom shots, however the 50-140 and 80mm macro both suffice for that, but it's a subjective choice.



X-MOUNT TRAVEL 'TRINITY' OF LENSES

My favorite trio of X-mount travel lenses are these, the 16mm 2.8 (tiny dynamite), [the 18-135](#), and [the 55-200](#). If one camera and lens only, most certainly the 18-135, in fact I could glue (not literally) that lens onto my XT30 and be happy! So very useful! If I was going to some place with sweeping panoramas and or doing interiors shots abroad, the 8-16mm with the 18-135mm as my secondary lens.



LOWEPRO SLINGSHOT 250AW

My favorite “cross-carry” bag is most definitely the Lowepro Slingshot series, I own the smaller version of this also, but it’s a tad too small for enough gear. I recommend the 250AW.



LOWEPRO FLIPSIDE 300AWII, THINK TANK RETROSPECTIVE 30, & ONA BRIXTON

If there is anything I have far too many of and tried more of than anyone else, its camera bags! I love quality, however such recommendations are very subjective, but on the left in black (now in version #2) is the Lowepro flipside 300, love it! My single favorite bag that comes in endless sizes is the THINK TANK Retrospective. I have 4 of these in different sizes and they're just incredible, so comfortable and awesome! On the right are both the same bag, the ONA BRIXTON, they are not cheap but comes in different colors of leather and different colors of waxed canvas. I love these! The prince street ONA is really the same bag but a bit smaller, but it doesn't really hold enough gear for me. These are my top bag recommendations.



MILITARY SURPLUS ‘GAS MASK’ BAGS FOR LENSES OR YOUR CAMERA

Oh boy you can have some great times buying these very cheap military surplus gas mask bags on Ebay, the average price is \$5 or LESS! They’re made tough as woodpecker lips, and they’re really cool! Suggest looking at the endless designs of these from different countries and spending the price of a cup of coffee on one or two!



FRINGER AUTOFOCUS ADAPTER FOR CANON TO FUJIFILM X-MOUNT

To “fill the gap” of some missing focal lengths I have and use the fringer autofocus adapter with a couple great Canon lenses, foremost being the 135mm f2. These adapters work very good with Fujifilm X-mount cameras, check them out on their website and their lens compatibility chart.

<https://www.fringeradapter.com/#for-x-mount>



THE SIRUI CARBON FIBER MONOPOD

It is a fact that most things do NOT need a tripod rather a monopod is best. The single best monopod for the value (\$105+ average) is the Sirui P-326. I have two of these and use them all the time, as the base for my 200mm f2 Fujinon lens, or my 250mm GFX lens, these are extremely useful!



EXTENDED ISO SETTINGS

You cannot use the extended ISO (upper and lower) settings unless your shutter is in either **MECHANICAL or EFCS**. Extended ISO is not possible in ES for example.

REACH OUT THERE ON THE SMALL

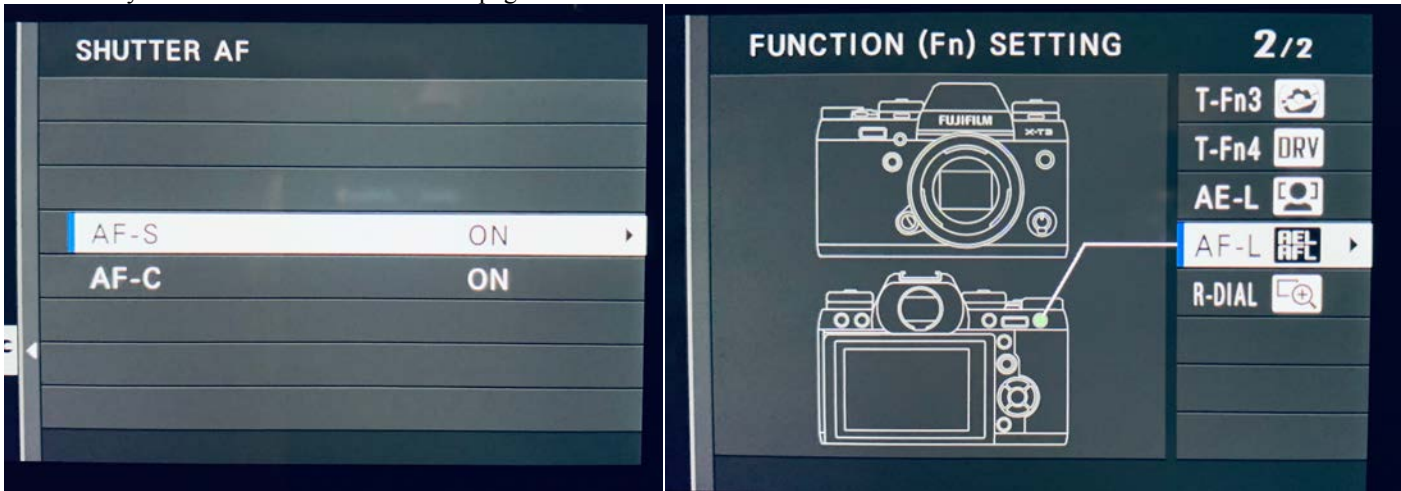
I have more than a few viewers who have contacted me that use photographic gear for surveillance & detective work. Likewise I even get asked that question from time to time. I can't image a better package than the Fujifilm X-T30 and the 100-400mm Fujifilm lens with 1.4X teleconverter. However for fun and for wildlife and its amazing onion ring bokeh is this beast below, the 500mm f8 Nikkor adapted. With focus peaking, nailing focus is very easy. Only a \$24 adapter is required.

This lens is also very lightweight and very easy to focus. However I would recommend putting this lens on the X-H1 since it has IBIS to stabilize this 500mm lens. It is also very sharp and people think mirror lenses are rather junky, however the most expensive optics on earth are mirrored optics! This is a fine piece of precision Nikkor mirror optics with a fixed f8 aperture (it doesn't have an aperture!). This is the most lightweight and long telephoto option with high MP and resolution anyone could get on an interchangeable lens camera.



BACK-BUTTON AUTOFOCUS SETUP

I honestly would never set this up on the X-T3 or X-T2 because the AF-L/ AE-L buttons are too small for me and for most people, however it is ideal for the X-H1 and it was designed to be so on that camera. But you can set it up any way you like. Firstly, go into your button/dial settings menu and then to SHUTTER AF, and for the AF-S setting, turn it OFF, what this does is removes the autofocus functionality from the shutter release to RELEASE ONLY. Second go into your function button settings, and change the function of either the AF-L or the AE-L buttons to work as “AF-ON”. Now these back buttons (whichever one you pick) function for autofocus and the shutter release now ONLY releases the shutter in single autofocus mode. You should NOT change the AF-C functionality however in the SHUTTER AF page.



THE EVER-USEFUL GROCERY BAG TRICK YOU SHOULD EMPLOY

I usually walk around on the lightweight and do not pack on my shoulder my camera bag, rather a spare battery in pocket and maybe some spare SD cards in a tiny case, so what do you do when caught in a cloud burst or sudden rain? I always stick an ultra lightweight plastic grocery bag in my back pocket so I can save the life of my camera as I walk (rather than run!) back to my car etc.



HOW TO SAVE BATTERY LIFE

Mostly its nonsensical to worry too much about battery life, rather you should always pack with you a spare 2-pack of batteries or more depending on where you are or what you're doing, however the primary thing that should be done is to press the VIEW MODE button until you reach the EVF activation screen where the camera EVF and LCD do not display anything until your eye is up against the EVF. While there are a few other minor methods to save some battery life, to worry about such a thing is mostly nonsensical. Always anticipate your shoot and duration and pack spare batteries and SD cards.

MICROCONTRAST, i.e. IMAGE FIDELITY IS 100% REAL Part 1

The very brief conclusion of the math below is that higher frequency light is more powerful, and HIGH element count lenses act more like capacitors (glass is mostly a capacitor, despite human ignorance that its only an insulator, which is wrong) because towards the blue end of the spectrum, the blue light gets washed out due to the dielectric permittivity of glass. Glass mfg. try to offset this by using lead (Zeiss does this, so does Voigtlander) or Niobium oxides etc. etc. **There is NO SUCH THING ON EARTH as a pure transmitter of energy (light is energy), including glass.** The higher the frequency and the more the glass, the more the tonal detail and higher frequency light does NOT get transmitted to the sensor.

THE EQUATION OF ALL ELECTROMAGNETIC ENERGY, INCLUDING OF COURSE VISIBLE LIGHT

$$E = h\nu$$

Energy (E) = Plank's constant (h) x FREQUENCY OF LIGHT (v)

MICROCONTRAST, i.e. IMAGE FIDELITY IS 100% REAL Part 2

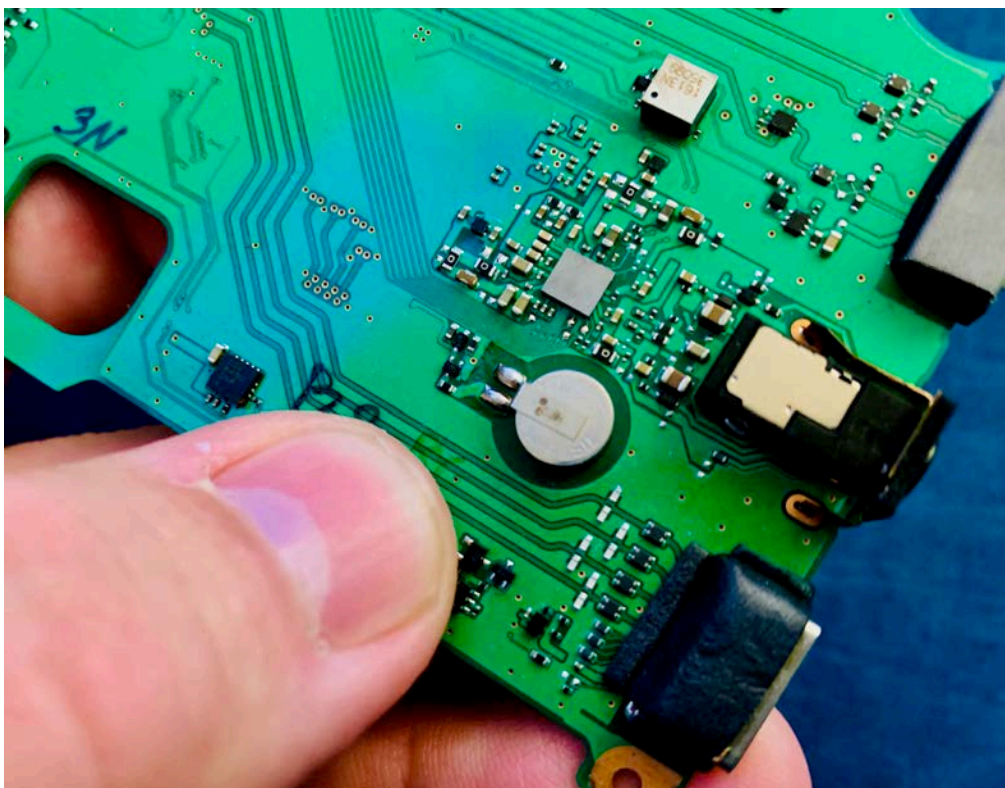
I have listed the top image fidelity Fujifilm lenses in the lens section of this book. Suffice to say one of the great things about Fujifilm low element count lenses in wonderful ways, such greats as the Voigtlander 58mm f1.4 Nokton, the Voigtlander 50mm f1.2, the Nikkor 135mm f1.8 AIS, the 35mm f2 Zeiss Distagon, and so many others is their tonality of image rendering. This low gain intertonal detail allows depth and tonal gradations that make images literally pop.

Alas there are countless clueless people that think image fidelity (i.e. microcontrast) is something akin to a unicorn, i.e. not real, however these people are the lens equivalent of those that are tone deaf, or the person with dead taste buds that think \$5 WalMart wine "tastes no different" than a \$5000 Italian bottle of Merlot, etc. Signal SNR is as real as a heart attack in fact, and this low-gain intertonal detail that makes up and defines image fidelity (aka Zeiss pop, microcontrast, lens pop etc.) is absolutely a reality. All ham radio operators know what signal gain is and sound fidelity, however almost no photographers can define it, in fact most ignorantly think its unreal. Such is the nature of human agnosis.



NEW CAMERAS NEED THEIR HIDDEN INTERNAL BATTERY CHARGED

I often get emails from people who think their camera is faulty when they remove the BIG main battery from their new camera and lose all their settings, but the fact is that there is a hidden internal battery that holds all those settings that needs to be fully charged. As you can see below there is a tiny “pill” or watch-like battery attached to the main board inside your camera. If your new camera has been sitting on the shelf for a month or so (most likely has!) its little internal and hidden memory battery (some call it the clock battery but it does more than that, it powers up the memory that keeps your settings!) needs to be FULLY CHARGED (overnight) before removing your main battery for whatever reason. Unless you’re putting your camera away for “cold storage” keep your battery in it otherwise you will lose all your settings within a week or two.



THE BUILT IN SENSOR CLEANING IS 95% USELESS

The default is ON for the “built in sensor cleaning” and if very quiet you can hear it turning off or on your Fujifilm camera, it will be making a slight buzzing sound, and this is the ultrasonic ‘shaker’ attachment to the cover glass closest to the lens. Many different camera mfg. have this feature and it’s almost entirely useless. This device cannot remove spots and other gunk that makes it way to be-spot your cover glass, at best is merely shakes off very loose fuzz and dust to the “bottom” but since it doesn’t actually remove ANYTHING that same dust will fall back onto the cover glass when you invert the camera, so (dohh!) there you have it. This is one of those “isn’t that great” features on modern digital cameras that should not be there, just like the delete button itself. Make sure you learn how to clean your sensor for real and not be afraid to do so! It’s necessary that you learn this skill!



REMOTE SHUTTER RELEASES

Depending on which Fujifilm camera you have, you have options for old style threaded mechanical shutter releases, or a RR-90 Fujifilm (Micro USB) release cable (X-T2 and others), or the newer RR-100 release for the X-T3 and others. But the best value, and available in many different end connectors is the VELLO remote release, shown below is the Vello RS-C1II with a 2.5mm mini connector. Important of note is that you can connect an electronic remote shutter releases into the microphone port.



YOUR CAMERA IS YOUR CAMERA, & YOUR COMPUTER IS YOUR COMPUTER!

Why are there no tips in this book about in-camera RAW conversion & processing? Because not a single professional would think of doing such a thing, much less do it. Looking at a tiny LCD display and attempting to manipulate images on your camera is as insane as trying to do your work on your iPhone rather than your computer. I will not explain, nor endorse such absurd nonsensical endeavors nor are they useful, and certainly not so tips & tricks.

All digital cameras (even the very expensive professional ones) contain “isn’t that neat” nonsense features to impress people and pad the specification sheets but which are utterly absurd nonsense relative to actual working photographers. Likewise too are “advanced filter effects” nonsensical. If you want such effects you can do 100% better in RAW post-processing in Lightroom or Capture One.

There are three levels of a device, 1. Necessary (brakes on a car for example). 2. Useful & Neat (cup holders, seat warmers). 3. Cute (nonsense like built in umbrellas in the doors of a Rolls Royce). In-camera RAW conversion, “advanced filter”, in-camera HDR, etc. are all rainbow-candy-sprinkles on top of the ice cream to dazzle the gullible.

FUJIFILM 1.4X TELECONVERTER & MCEX-11 (11mm) EXTENSION TUBE

The FUJIFILM XF 1.4x TC WR teleconverter is designed for use with the 100-400mm and 50-140mm lenses and works wonderfully; while I am not an advocate of teleconverters on telephoto zoom lenses, Fujifilm have implemented this one extremely well.

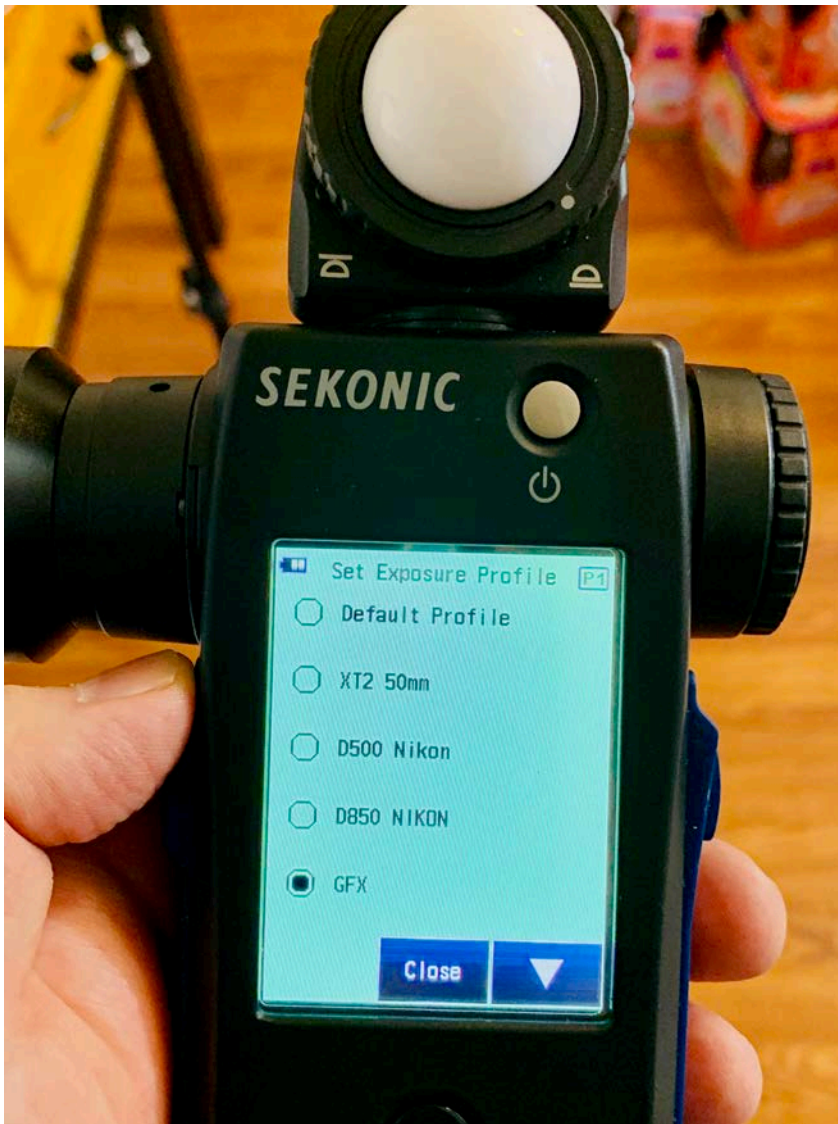
While Fujifilm does make a 16mm (MCEX-16) extension tube, it is too long for practical consideration and I do not recommend it, rather the MCEX-11 (11mm) tube, see compatibility in the chart below on Fujifilm’s website. Interestingly this extension tube is amazing on a handful of lenses and you can get incredibly close with it. Best results are found using this extension tube on zoom lenses where you have some room to move in and out some. Such a tube (the MCEX-18G WR) for the GFX series of cameras is also wonderful and I recommend the MCEX-18G WR highly.



CALIBRATED LIGHT METER SEKONIC 858

Light meters, contrary to ignorant understanding, is actually very necessary for many aspects of photography, but not MOST PEOPLE'S photography. Specifically product photography, interior shoots, and incredibly invaluable for light layering (multiple light source flash photography) and knowing your lighting ratios and which to adjust. Without a meter, using a studio strobe with a new client, for example, you will look like a bumbling fool testing, adjusting, testing, adjusting...A light meter removes ALL such inept fumbling.

People think a light meter slows them down, but nobody that knows what a light meter is FOR would ever think that, it does just the opposite, it speeds things up. As you can see below this 858 Sekonic has calibration partitions to know the dynamic range of specific cameras I have programmed it for, making ETTR / sensor saturation a breeze. 95% of professional photography is flash photography and studio strobes and light meters go together like eggs and bacon. The best entry level meter is an old used Minolta IVF meter for about \$100.



SPEED BOOSTER NONSENSE & TELECONVERTERS

Since I am always asked about these two, the answer is short and sweet. Teleconverters should only go on prime lenses, (almost) never zooms. Further more speed boosters are garbage that ruin & mess with the divine (depending on the lens) light being dropped out of the back of the rear element. When someone says speed booster, I immediately think of someone putting a huge red spoiler on the back of a classic BMW or Mercedes. It's insane at the least, and unthinkable at the best.

SOFT SHUTTER RELEASES ARE WONDERFUL

Available in countless sizes, colors and shapes, soft shutter releases for your X-T3, X-T30, X-T2 etc. are really a must. Grab some on Ebay CHEAP! Why cheap? Because the first thing you'll realize is even if you use a rubber O-ring to lock the release onto the camera's release, they can and WILL come off and be lost (so easy). Do not buy the expensive releases (over \$10), because you will bemoan losing them when out in the field. Honestly these little soft shutter releases greatly improve the handling-use of the X-T3, X-T2 etc. cameras, and I myself can't be without using one! **DO NOT OVER TIGHTEN the soft shutter releases**, this can cause deformation of the 'silo' which slides as a sleeve down onto the button that is the actual shutter release.



SOFT SHUTTER RELEASES ARE AWFUL!

As you can see from the image below, taken immediately after my soft shutter release fell off into the grass never to be found again by anyone. DO NOT BUY “expensive” soft shutter release buttons! No matter the rubber washer or how much you tighten them, they will self-unscrew and fall off.



LEAVE YOUR BATTERY IN YOUR CAMERA WHEN NOT IN USE BECAUSE ...

After (depending) a week or so of leaving your battery out of your camera the internal battery (often called the clock battery, but also retains the power to your menu settings) will drain to exhaustion and you will lose your settings. All digital cameras have these tiny little “pill” rechargeable batteries inside them. You should keep a spare battery in your camera all the time unless you want to store away your camera for long storage.

MY FUJIFILM CAMERA IS MAKING A RATTLING NOISE AND MY LENS HAS A ‘THUNKING’ NOISE!

This pertains to just the body with the lens removed. I get this email question all the time. All my eight Fujifilm cameras do the same, it’s the tilt sensor and or the shutter curtains that are ‘flopping’ in their assemblies, just as they’re supposed to. No worries man! The same question is also asked about some lenses, and that is when power is off to linear rail lenses (90mm, 80mm macro etc.) the AF assemblies are free to slide around inside and make a ‘thunking’ noise.

MY FUJIFILM LENS HAS A ‘BUZZING’ NOISE!

This is totally normal, it’s the lens’ OIS mechanism, and this will be present even if OIS is turned off.

CAMERA FIRMWARE UPDATE POINTS

Always use ONLY card slot #1 for firmware updates. Remove the 2nd card while doing firmware updates. Format card #1 in camera ONLY before taking that card to your computer to drag the firmware into the root of card #1. Make sure your battery is fully charged.

NEVER BUY OR USE SILICONE CAMERA COVERS

People buy these junk silicone covers for their camera, don't do it. These are purchased to "protect" the camera, and to prevent minor bumps and scratches etc. however all they do is trap dirt, and worst trap moisture and cause premature camera corrosion and self-destruction.



MANUAL FOCUS LENS FOCUSING TIP

I grew up on manual focus lenses, but most have not. But with focus peaking it's very easy now to nail focus, but what about speed? There is a neat technique for fast manually focusing lenses I call the rocker technique, you simply quickly roll the AF wheel on the MF lens until you see peaking is achieved, BUT since you were going fast, you went just a bit beyond it, then you quickly roll back just a bit, but again you went just beyond it by a little bit, now you have the middle difference between either end where you went beyond focus; so now you go to the center of that roll you made and take the shot. This requires some practice but after a while you will have it nailed and you will be shocked at how fast you can be with MF lenses.

FOR USED GEAR I RECOMMEND

I only recommend EBay for oddball small and inexpensive things that are hard to find in most all cases. For used camera gear, lenses, tripods, bags & much more the single best entity is without a doubt **USED PHOTO PRO** which is the sister business inside Roberts camera. I have no connection to them financially whatsoever. I get asked all the time where to get the best deal, prices and promise of quality and trustworthy used gear and they are indeed it.

<https://usedphotopro.com/>

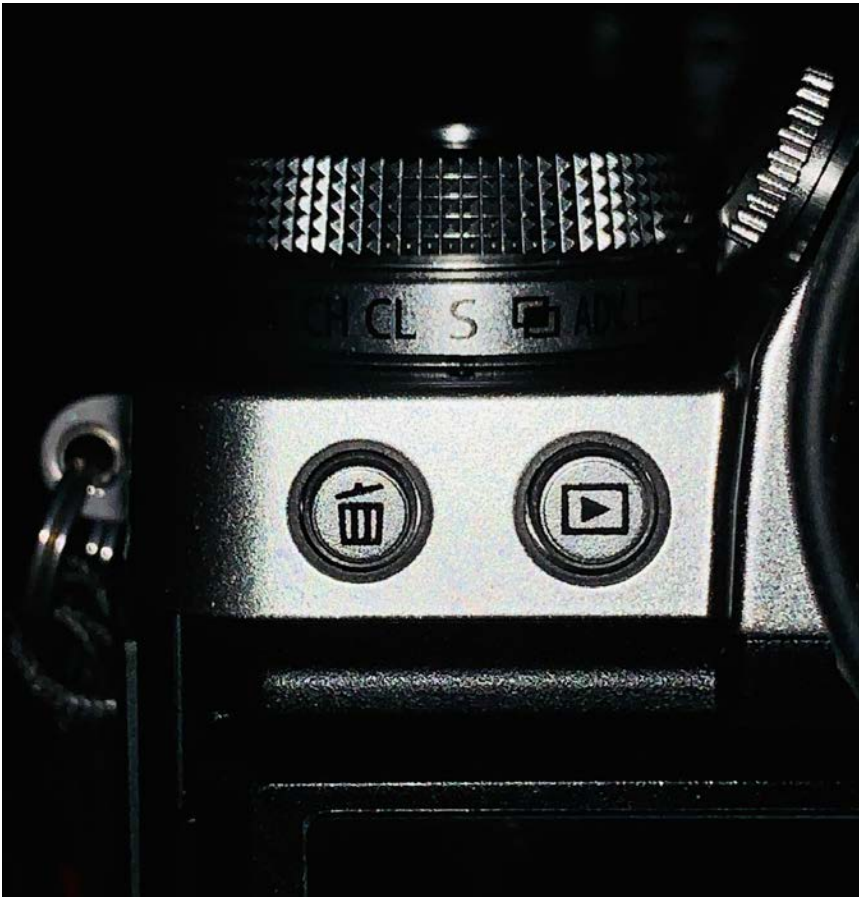
Their phone number is (317) 917-7055



NEVER USE THE DELETE BUTTON, EVER

Other than to use the shortcut for fast formatting, never use the delete button to erase images on your camera, EVER! This tip applies to all digital cameras in fact. The reason is (and I have received many emails from people who corrupted their media cards) there is a chance for media card corruption doing this. **There is ABSOLUTELY NEVER a reason to use the delete button.**

1. If you "run out of space" and want to delete images to "free up space" then you failed miserably in not bringing spare media cards.
2. When you're done shooting, offload and backup all images to your computer, then (never on the computer!) reinsert the cards into the camera and format the cards there.
3. This delete button is an illogical and inept hold-over features from years and years ago, a delete button should not exist on a digital camera. Do not attempt to use your camera for image culling and sifting. Do that on your computer only.
4. Corruption of media cards can and has occurred countless times by people culling images on their camera. This is an absolute fact, not a "myth" etc. I have personally also seen it happen twice. Do not use your camera as if it were a computer. Further more never format your cards on your computer, only your camera.



THE MOST SUSCEPTIBLE ENTRY POINT FOR MOISTURE INTO YOUR X-T3 / FUJIFILM CAMERA

The four port connectors on the left side are soldered onto the main board (the most fragile part of any digital camera) and the gaps around these are the most easy entry point for moisture (along with the LCD feed cable). Likewise, unlike the SD card slots on the right side which have a rubber gasket around them to protect entry of moisture, the left side door does not have a rubber gasket. I have, since I do not do video with my X-T3, used gaffer tape to seal off these portals.



WHY YOU SHOULD SHOOT FINE+RAW ALWAYS

Not only should you mirror-copy all your images onto your 2nd card in your Fujifilm camera (“backup” setting as Fujifilm calls it), because redundancy is God,...you should absolutely shoot FINE+RAW. Why? Two reasons, firstly when reviewing images in your computer for the best image to select before processing the raw image you can preview the jpeg and cull out the best shots, this saves a LOT of time. Secondly, shooting FINE+RAW lets you, in playback, see a true 100% zoom into the image and therein check critical focus of your shot taken. This is only possible if you choose FINE+RAW to allow a true 100% zoom image preview. Furthermore do I need to state the obvious that if you are not at LEAST shooting RAW files, you are making a huge mistake and should know why!



EYECUPS TO FIT YOU

For the GFX50s, X-T3, X-T2 etc. etc. cameras (see image below) Fujifilm offers a shallow, medium, and long eyecup that interchanges in seconds on your camera. I, for example, always put the long eyecup on my cameras because of personal preference, and glasses. Buy a complete set and see what best fits you, you likely will be surprised.

EC-XT S



Features

- This is the thinnest eyecup.

Compatibility

FUJIFILM GFX 50S / X-H1 / X-T3 / X-T2 / X-T1

EC-XT M



Features

- This is the same eyecup as included with the FUJIFILM X-T2.

Compatibility

FUJIFILM GFX 50S / X-H1 / X-T3 / X-T2 / X-T1

EC-XT L



Features

- The dome-shaped eyecup effectively shields light, making it easier to see the viewfinder.
- The soft material also improves the fit for users shooting with the naked eye or with glasses.

Compatibility

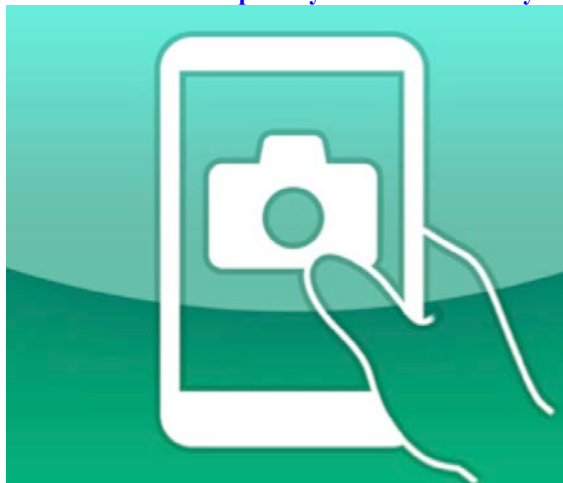
FUJIFILM GFX 50S / X-H1 / X-T3 / X-T2 / X-T1

USE THE FUJIFILM APPLICATION FOR REMOTE RELEASE & OTHER FEATURES!

I get asked all the time about remote release options for a Fujifilm camera and the best one is a free download for your phone!

Download the Fujifilm APP and you can use it as a remote release, camera adjustment, picture taking, video and much more!

However it is an extremely BAD IDEA to consider using a remote application for updating the firmware, this should NOT EVER BE DONE. Update your firmware via your media cards directly.



DO NOT BOTTLENECK YOUR CAMERA FOR ACTION & BURST PHOTOGRAPHY!

A seriously common issue is people having bought a X-T3 etc. is they then purchase cheap slow cards, or use ancient cards they've been using for many years. For single shot photography this is not an issue, however it is a serious issue for ANY and ALL burst photography for sports/action, video etc. Purchase at least two (yes, they are expensive) 300mb/s Sandisk SD cards.



DON'T FORGET BOOST MODE ON YOUR CAMERA!

Honestly I've never seen such a forgotten (of the many 100s of tech support emails I get) entity on peoples Fujifilm cameras as that of the ignored but greatly useful boost mode switch. Use it often and don't forget to turn it on!



PLEASE LEARN HOW TO USE THE VIEW MODE BUTTON!

A huge issue people have with their Fujifilm camera is they forget the view mode button is even there, in DEFAULT, which is eye sensor, the camera is draining power to either the EVF or LCD even if you're just puttering around doing nothing until the auto shutdown kicks in, turn that off that mode to save power, scroll thru the settings by hitting the view mode button again and again until you reach the one just after LCD ONLY, which is BOTH off UNLESS you put your eye up to the EVF which then turns it on. For walking out and about, this saves a lot of power and is recommended. But, depending on your camera, you have 5 different choices by tapping the VIEW MODE button again and again. Learn when to use these to save power.



GAFFER TAPE TO PROTECT THE MAIN BOARD FROM DUST & DEBRIS FROM REACHING THE X100F SENSOR

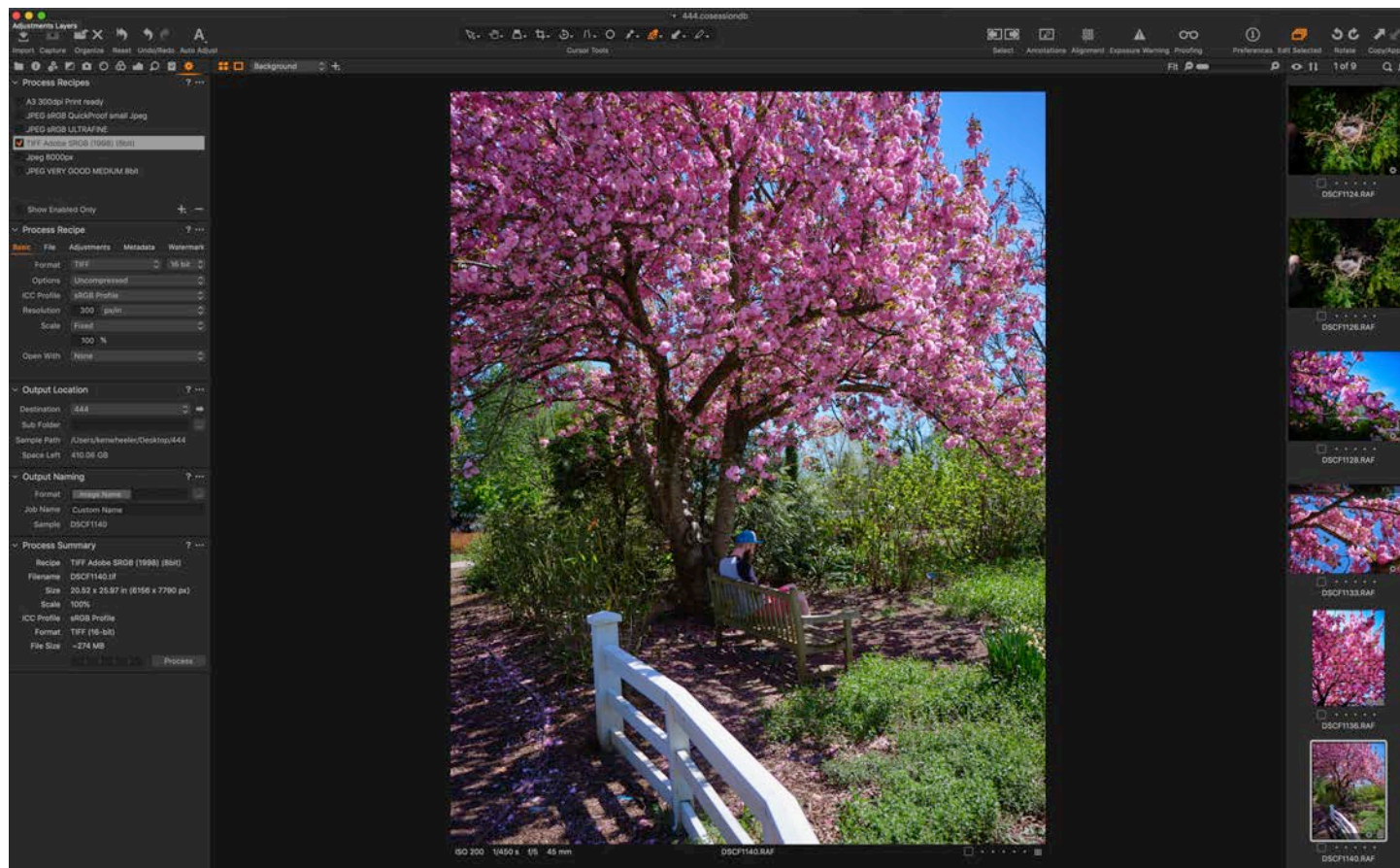
A great little idea for keeping dust and moisture out of "sealed" cameras like the X100F with no removable lens is to seal off the microphone holes and side panels. You can remove it easy at any time without marring the finish of the camera. It is the case of course that you cannot clean the sensor on these cameras since the lens is not removable!



CAPTURE ONE PRO RAW EDITOR FOR FUJIFILM FILES

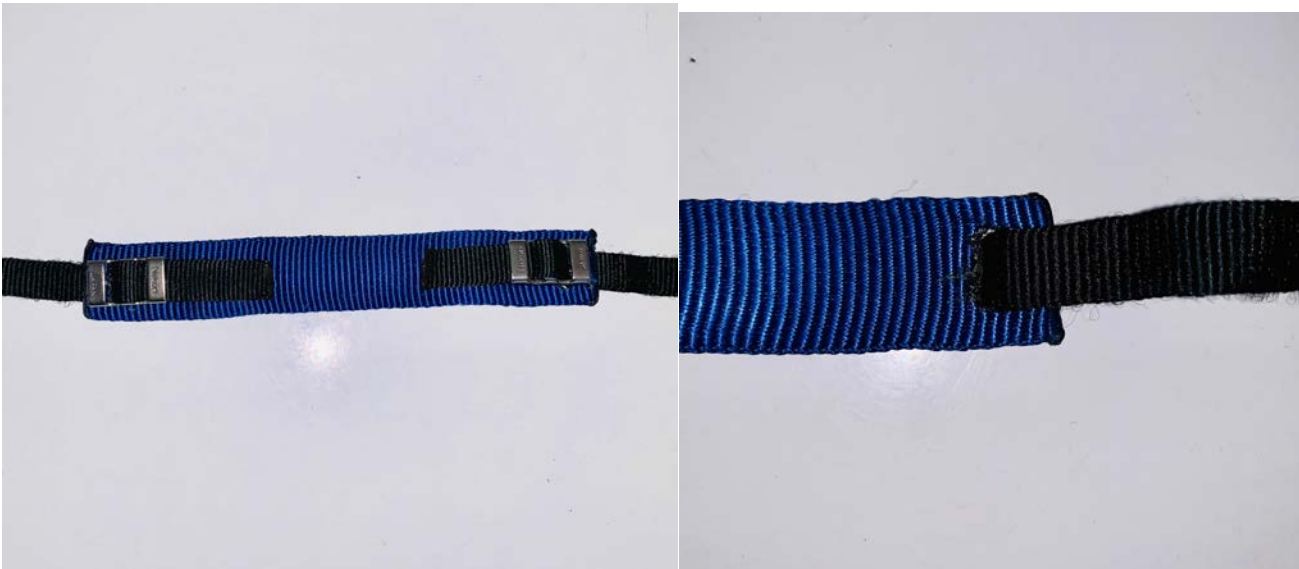
I am a longtime user of Lightroom and Photoshop, of which Photoshop is a pixel level editor for which there is NO replacement, and there is nothing even close and never will be, period. However for RAW editing, while Lightroom has a few advantages for speed, for sheer output nothing beats the RAW Fujifilm file output of Capture One Pro, nothing at all. Fujifilm themselves worked intimately with C1 (Phase One company) to create not only full support for Fujifilm RAW files but the best output possible. Countless free training programs exist on youtube and elsewhere for C1 and I recommend you at least try it.

<https://www.captureone.com/en/products/pro>



HOW TO MAKE A CAMERA HANDSTRAP

You will need a strip of 1" nylon webbing, or leather if you choose. And lastly an old camera strap you don't mind cutting up. Cut off the two 1/4" ends of the strap leaving the strap buckles. Next measure a piece of webbing or leather large enough to fit the entire back of your hand. 1/2" from either end of the strap you will cut (or burn in the case of nylon, using a soldering iron) a slit for the strap ends to enter. See image below. Attach this to the right side of your camera lug and then to the bottom of your vertical grip or bottom of the camera. Remember to measure twice and cut once.



TWO POINT HANDSTRAP IS SO USEFUL FOR MANY REASONS!

A two point hand strap removes MOST of the contact of your hand from the camera which aids greatly in vastly reducing camera shake. Further more it removes the heat and stress from many hours of "death grip" holding the camera.



VELCRO LINED LENS HOOD TO CUT FLARE

If you go to your Lowes / Home Depot store they sell rolls of industrial Velcro, and I use the loops side to line some of my most used lens hoods to cut out reflections from the sun bouncing back into the lens. Back in the day when lens hoods were all meticulously made (and current very expensive lenses), they used black matt flocking on the inside of lens hoods, but now the cost and labor keeps all lens mfg. from doing this on all but the very most expensive lenses.

Also too, place, using your finger a single thin line of Teflon grease on the mounting grooves of the lens hood to remove stress from breaking and ease of mounting and dismounting the hood from the lens.



SANDISK EXTREME PORTABLE SSD TYPE-C FOR TRAVEL & PHOTO STORAGE

I have several of these, and I recommend buying a pair of 500GB Sandisk Extreme portable USB-C SSD. If they're on sale, then the 1TB unit. These are THE MOST perfect portable storage devices that cannot fail from plane or car shock, with no moving parts, very compact and very fast. The Type-C comes with an older USB adapter end also if you don't have a USB-C port on your computer, adapter shown in picture below.



DATA REDUNDANCY IS GOD!

I have written much for Apple.com on data redundancy and spent an enormous amount of time thinking about same. Don't spend a fortune on camera gear only to lose your precious images due to ineptitude in not having a strong data backup and archival plan in place! Here are some rules of data redundancy I created to 'live by':

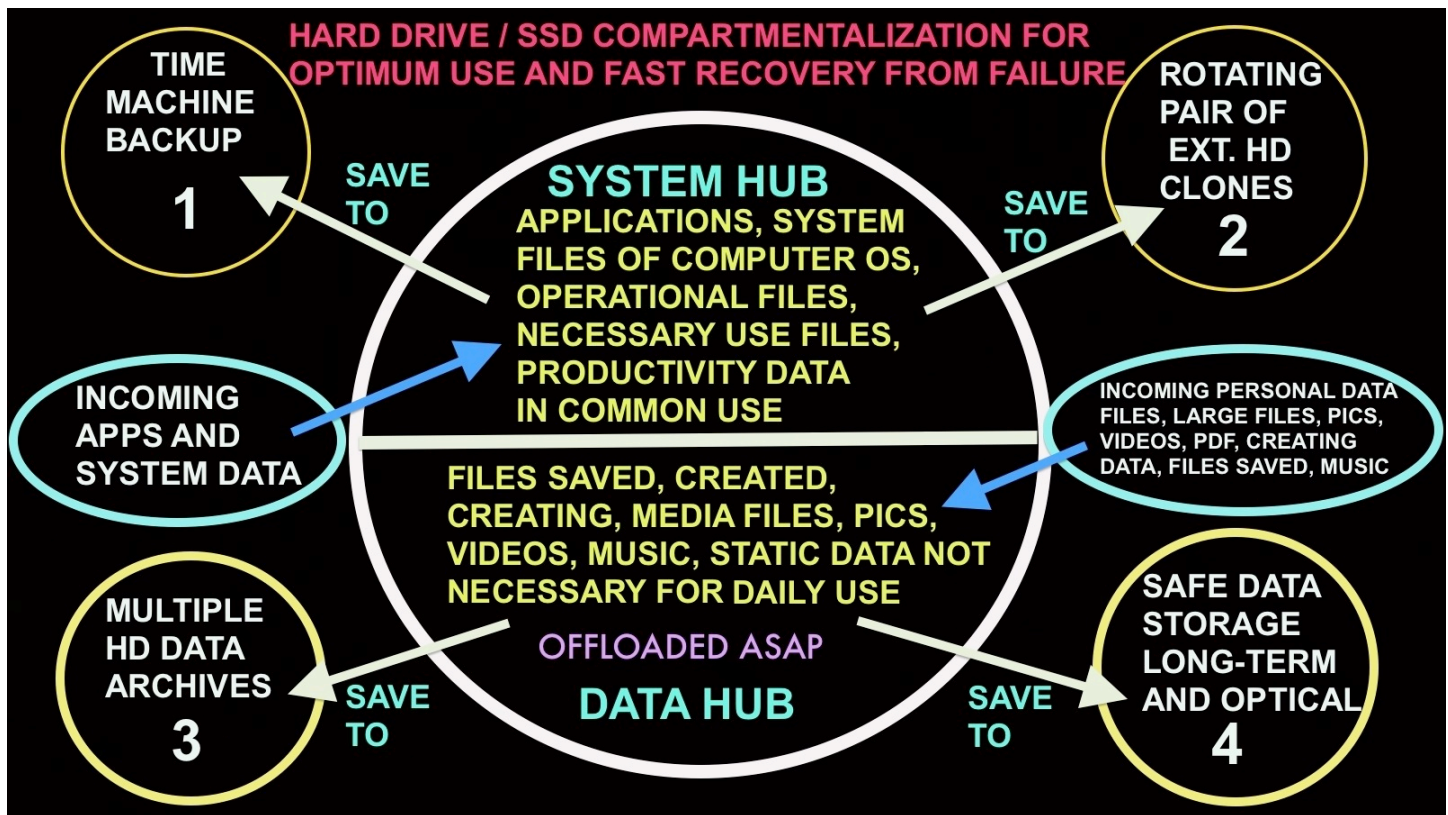


Chart copyright 2008 Ken Wheeler

RULE #1 When (not if) your internal HD / SSD or external HD crashes or fails, and this creates a bad problem, or any problem for yourself regarding worry about your data, ... then you have a problem that must be fixed in your data protection plans.

RULE #2 Everything begins and ends with redundancy of your data. Data redundancy begins at... 1. All data on the computer is just that, your data. 2. All data on the first external HD is your backup. 3. Only the second external HD is your first safe data redundancy.

RULE #3 Decentralize your data off your computer ASAP to external, online etc. backups and archives.

RULE #4 Make copies of the original data if possible at all times, and not copies of a copied copy.

RULE #5 No computer, regardless of HD or SSD size is a data storage device, and should never be considered as such.

The B.A.R. "rule" (backup-archive-redundancy) **Backup:** Active data emergency restore. Backups are moved from backups to archives; or from backups to the computer for restore or data retrieval.

Archive: Active and static data protection with the highest level of redundancy. Archives are only moved from itself to itself (archived copies). Generally a "long-term retention" nexus.

Redundancy: A fail-safe off-site or protected and "frozen" copy of your vital data and foolproof protection against magnetic degradation and HD mechanical failure. A likewise failsafe from theft, house fire, etc.

Redundancy has two points of premise:

A: redundancy (copies) of data archives.

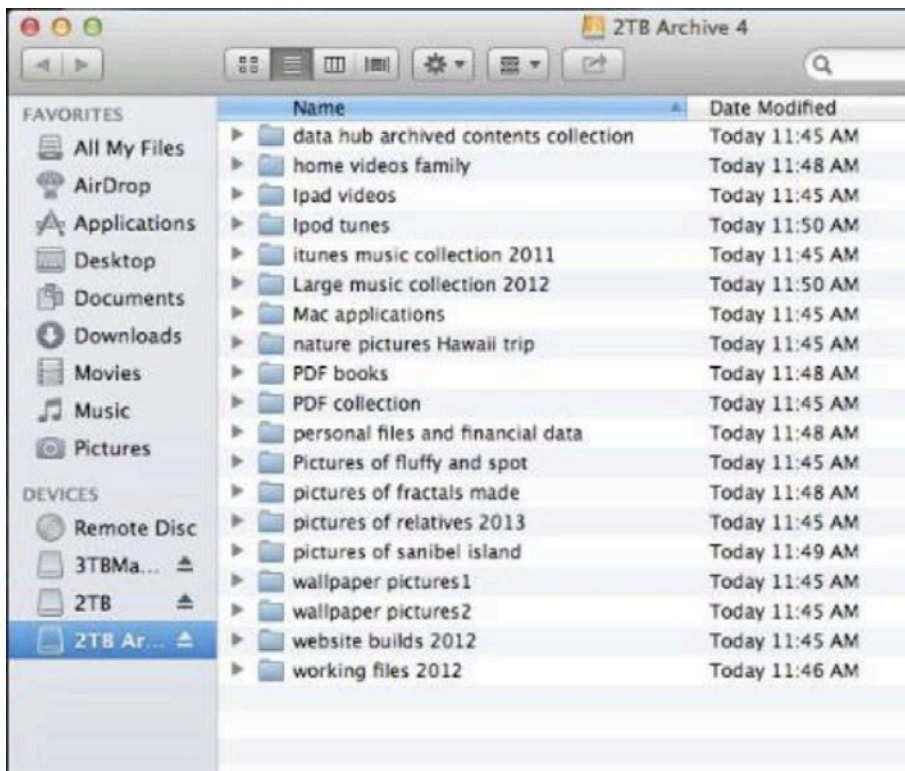
B: redundancy of data on different platforms (optical, online, magneto-optical, HD).



KEEPING IT SIMPLE FOR ARCHIVING AND STORING AN ENORMOUS AMOUNT OF DATA

While there are countless data file systems out there for keeping huge data organized, there are far simpler and low-tech option for even keeping collections as large as 20+ terabytes at handy and quick find access (as I can personally attest to with a 40 terabyte collection). Using your Mac for screenshots or using a screen capture tool you can and should make a snapshot of each HD or DVD clone with the name of that specific HD or DVD number or name. After this you would then make an autonomous folder named, for example “data hub archived contents collection”; and inside this folder would be a picture of each HD or DVD, its designation, and its contents/folders. As seen below, this is a screenshot of one hard drive, and its respective folders. The image of this HD contents is collected in a folder as mentioned above and a copy of that folder is placed inside every archive and clone location possible, so in case any HD crashes or any DVD archive is lost, you can look back as to its contents and make a new clone of the crashed or lost archive. Most helpful however is to use this picture folder to find folders and files quickly without docking multiple hard drives or DVDs to find a specific folder or file.

Screen capture of HD archive contents filed in multiple places for easily finding data and recovering files:



TRIPOD WITHOUT A TRIPOD, WHAT?...

This unique device below can be made in about 5 mins. Out of 3 mini carabineers (keychain carabineers) and some 5mm elastic shock cord. One of the bottom Y shaped loops attaches to one side of your hip belt loop and the other to the other, the single Y remaining end attaches to a black rapid FASTENR on the bottom of your camera. With this device, you can take very slow shutter speeds up to about half a second in places where tripods are not allowed, museums, etc. You will be amazed at how effective this little DIY \$4 device is!



YOUR FUJIFILM CAMERA (and all cameras) WANTS EVERYTHING TO BE 18% GREY

What is the difference between the left and right image below? The image on the left is a black wall, and the one on the right is a white wall. Both are exposed to the standard 18% grey as suggested and executed by your camera's matrix metering. Furthermore, assuming nothing else in the composition, the shot on the left has MORE DETAIL in the RAW file (much more) than the image of the white wall on the right! Why? Because the black wall image on the left was given more detail (assuming details in the black subject, or wall etc.) in the RAW file from a longer exposure than the foreshortened exposure of the white wall or subject as the case may be (snowy outdoor shot for example) of the RAW file image on the right.

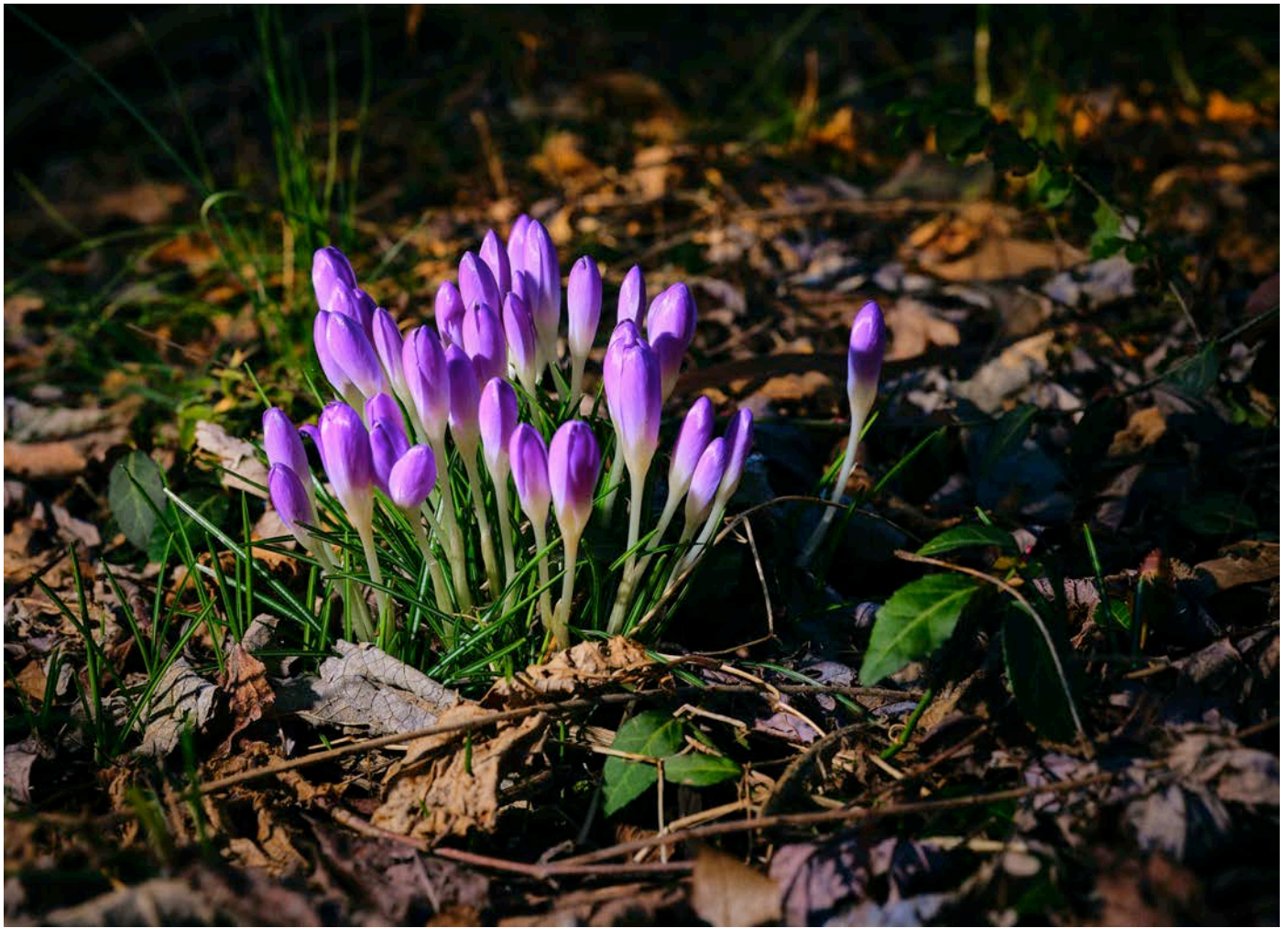
Whether spot, center or matrix metered your Fujifilm camera (all cameras in fact) wants to the WHOLE WORLD IT SEES to be slate grey. Learn the dynamic range of your camera and LEARN when to trust and when NOT to (most often the case!) trust your camera's exposure recommendation. Because that's all ANY camera's exposure is in Auto, Aperture priority, or shutter priority; a recommendation based on averages from reflectance. The same is true in TTL flash photography where a whiter reflectance will shut off your speedlights output prematurely and under-saturate the subject or scene of your shot. More information is ALWAYS BETTER, ALWAYS!!! Saturate your image IN CAMERA (without clipping highlights), EXPOSE IN COMPUTER. While WYSIWYG is fun and desirable, it also makes the shooter lazy and almost always leads to under-saturation of your image. While your modern Fujifilm camera (and others) has amazing (this is why you shoot RAW!!!) shadow and highlight recovery potential in LR, C1 etc., more information is ALWAYS BETTER. Raising lost (not captured!) details (with your sliders) in shadow from a non-saturated image leads to muddy looking low contrast shadows lacking finer tonal details due to: 1. Not saturating your image (ETTR) 2. 'Listening' to your camera's exposure recommendations (which are usually wrong or conservative). 3. Being addicted to the "look you want" via the EVF and its WYSIWYG image projection.



FOLLOWING WYSIWYG MAKES YOU LAZY & ALMOST ALWAYS LEADS TO UNDER-SATURATION OF YOUR SHOT

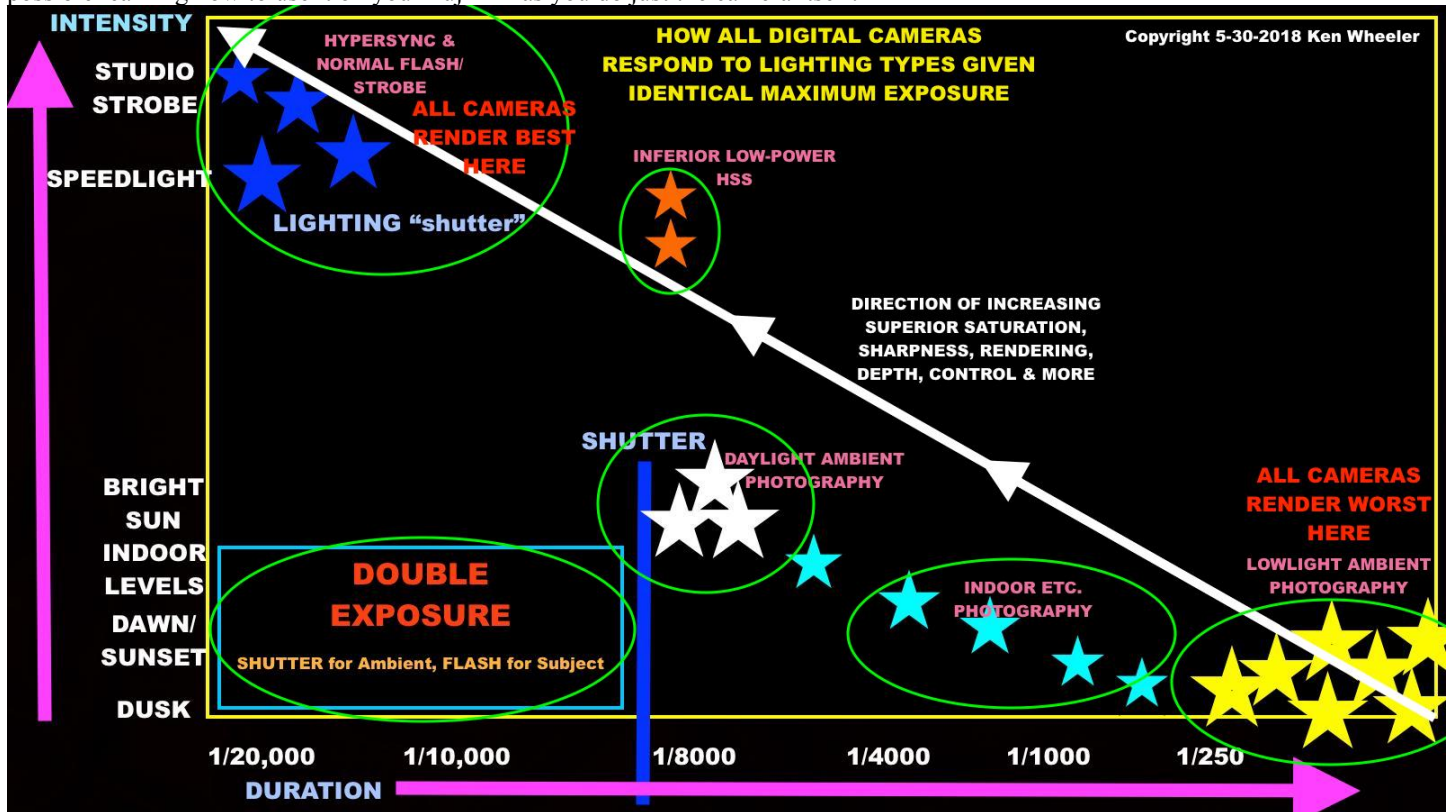
The shot below is the final image I had in my mind that I wanted from this shot, however if I dialed in exposure compensation to make the shot appear (darker) this way in the EVF (WYSIWYG) and then took the shot, the RAW file would be under-saturated with insufficient tonal gradation. This shot as taken was about 2.3 stops brighter than the final image below. No matter what you do in post-production, you cannot magically manifest information that was never captured to begin with, i.e. the low-gain inter-tonal gradation that makes an image "POP" and likewise "makes" almost every B&W image also stand out aesthetically. More information is always better. Lifting shadow detail is far easier when more information is captured in RAW to begin with, ...if you rely on WYSIWYG you end up with muddy low-detailed shadows and low-level tonal details.

You should learn to saturate (essentially ETTR) your image when taking the shot and then later on at home etc. make it appear as you wish in your computer. Regardless of these facts, you need to sculpt the lighting as you wish from the very beginning, lighting angles, lighting ratios, etc.



ESSENTIALLY SIX TYPES OF ILLUMINATION FOR DIGITAL PHOTOGRAPHY

What can never be overstated is how incredibly important flash photography is for sensor saturation, even in incredibly bright outdoor lighting (for fill illumination in most cases). If you look long and hard at the chart below you will see that short duration high intensity (Xenon flash tube/bulb, speedlight or strobe) is the best image output and tonality for any and all digital cameras. There is a reason 90%+ of professional photography is flash photography. You need to grab a speedlight and radio trigger and spend as much time as possible learning how to use it on your Fujifilm as you do just the camera itself.



THE SIMPLE BOKEH TIP

I created this simplex bokeh tip to help people keep in mind how to get the best bokeh from their lenses. Be close to your subject, but have as significant a distance as possible to your background as possible. Likewise the more open the aperture the better.

‘GOLDEN 14’ RULE OF BEST BOKEH

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f4 OR preferably MUCH LESS, such as f1.4

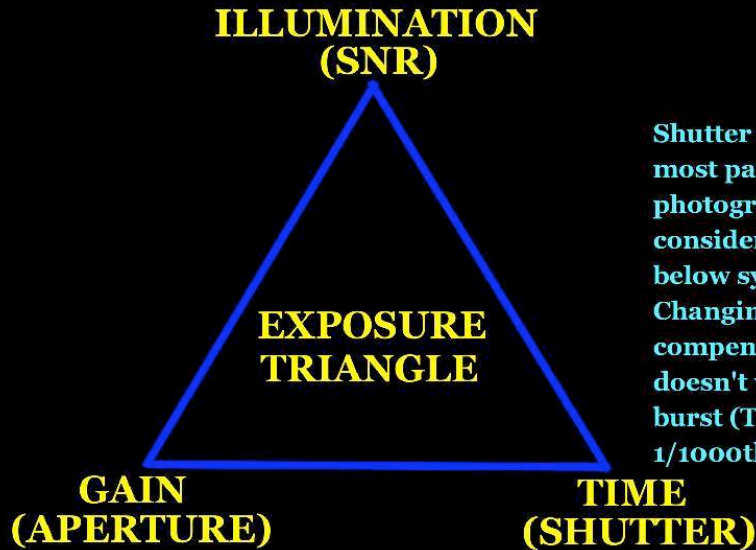
14 FEET OR LESS TO YOUR SUBJECT

**RATIO OF DISTANCE BETWEEN YOURSELF & YOUR SUBJECT
(1), & YOUR SUBJECT TO BACKGROUND DISTANCE (4) OR
GREATER
...A RATIO OF 1:4+**

ISO HAS NOTHING TO DO WITH EXPOSURE IN DIGITAL PHOTOGRAPHY

ISO in digital photography is not connected to exposure at all. Its input gain applied to the CAPTURED (past tense) image. Per unit of time (shutter) and gain/intensity (aperture) the third “leg” of exposure is SNR (signal to noise ratio), or the native gain of the sensor (BSI, conventional, pixel pitch or photosite size). This is also another reason for flash photography. On professional radios, there are 2 gain knobs, input gain, called GAIN, where the incoming signal is amplified as its coming in, and output gain, which is (as everyone is familiar with) called the VOLUME knob.

Exposure = Gain + Time
Correct Exposure = Gain + Time + SNR



Shutter speed becomes, for the most part, irrelevant in FLASH photography exposure. The only consideration is keeping at or below sync speed. Changing only the SHUTTER to compensate for a speedlight doesn't work since the entire flash burst (T1 time) is around 1/1000th second.

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ISO is applied Gain. *ISO has no direct connection to exposure, only to allowing the manipulation of Gain and or Time to suit composition

BEST SD CARD CASE IS THE PELICAN SD CARD CASE AND SECOND IS ...

Absolutely the best SD card case I have found is the (\$20) Pelican card case. It is very tough, waterproof and inexpensive. My second best recommendation is the THINK TANK SD card however its neither tough, nor waterproof, but compact.



FUJIFILM SD CARD RECOMMENDATIONS

The one great thing about the “expensive” (cheap actually) GFX cameras is that you are wasting your money buying super fast SD cards for the GFX50s or 50r. You should get these for the GFX current cameras:

Cards for the GFX50s and GFX50r: SANDISK 32GB EXTREME PRO UHS-I or 64GB since they're so cheap

As for the Xpro2, X-T3, X-T2, X-T30 etc. cameras that have the ability to rip off CL and CH burst photography you should purchase these cards:

Fast Cards: SANDISK 64GB EXTREME PRO UHS-II SDXC or 32GB since these are expensive.

Most people desire to “cheap out” on their SD cards after buying a fine camera, and you should absolutely NOT CONSIDER DOING THIS. There are countless ways to save money that I mention in this book, but this is NOT one of them.

You should NOT be considering 128GB cards since it violates the “too many eggs in one basket” rule of data protection, and that also still holds even though you are (or should be) making instant data backups to card #2 slot. This is especially very important on single card slot cameras like the X-T30, X-100F etc.



DON'T CHEAP ON YOUR BATTERIES (OR SD CARDS)

I am all about saving money and shortcuts to same, but I cannot recommend cheaper off brand batteries for your Fujifilm camera. Likewise the newer **NP-W126S** batteries have a round orange sticker on the end, whereas the older (different discharge profile) batteries have a square sticker on the end. Don't try to cheap out on your SD cards or your batteries.



BEWARE LOANING OUT YOUR FUJIFILM CAMERA

It must be noted that the Australian Platypus has a propensity for borrowing Fujifilm cameras for extended periods of time and not returning said gear. Their natural proclivity is to lay eggs in the lens mount hollow & many cases of damaged and destroyed gear have been reported to insurance adjusters & authorities. Don't loan your Fujifilm camera out to a Platypus under any circumstance.



INSURANCE!

Its extremely important to get insurance for your gear, or at the very least the most expensive often-used gear you have. In the US this is called an “inland marine insurance”, or a “personal articles policy”. This policy in most cases is APART from your home owners insurance or car insurance. It covers loss, drops, spills, theft, accidents etc. and in most cases has a zero deductible. Most important it is VERY CHEAP in price. I personally have about \$25,000 coverage for just \$400 a year. Contact your insurance agent about this kind of policy.

WHY IS MY EVF/LCD SCREEN JITTERY ALL THE SUDDEN!?

I get this email all the time, people will mess around doing nothing for 10 seconds or so without taking a shot or after half-press of the shutter release, and the screen gets VERY LAGGY / JITTERY, then they re-press the shutter button and all goes away. This is utterly normal, the camera “thinks” you’re just doing nothing and it goes into a small power saving mood on feeding the EVF/LCD and does not refresh it so much. If don’t want this to every happen, go into boost mode.

WHICH FILTERS?

I get asked this all the time, and the short and simple answer is that I only use ND filters and circular polarizing filters. Special effects etc. have now all but been relegated to post production for obvious reasons. I know there are countless great causes for graduated ND filters for landscape photography etc. but I have absolutely no use for this personally. Likewise I would never use anything more than a 3 stop ND filter due to nasty color shift issues and the fact of sensor saturation and other issues creating a problem. I know also that special need circumstances for time exposure and landscape photography calls for up to 6 stop ND filters, but I personally do not get that involved nor would I want to, but that is just me.

R72 INFRARED FILTER PHOTOGRAPHY

Ok! Here’s the deal on non-converted camera infrared photography with your Fujifilm. The best at this are the X-T2, X-Pro2, X-T20 and X-H1, all of which have the same sensor and IR hot filter. What you need (Go to B&H Photo website) is a **HOYA R72** (720nanometer filter for infrared). If you hold this filter up to a strong light it looks blood red.

The great news is that unlike all DSLR that require a tripod to do this, you can just walk around and take pictures like any other camera! But you need to use lenses that do NOT have a “hot spot” in the center for infrared photography. These lenses are my favorite for IR, that being the 35mm f1.4, 23mm f2 and some others. But those two especially. You will need to shoot wide open and ISO 3200 or 6400 in bright sunlight. The bad news is that these shots will look very grainy because only the red photosites are being struck so you’re really only using 1/3rd of your sensor in reality to render the composition, but that’s ok, you can see the results below. It is a lot of fun, and all you need is the filter! The X-T3 series of sensor is a different BSI mfg. and must have a different hot filter, it does not respond so nicely as does the X-T2 series of sensors.



NEVER USB CHARGE!

While Fujifilm does show and speak of charging your internal battery via the USB connector, you should NEVER do this. You are charging across and thru the main board, and any voltage spike or spurious current and you will fry your main board and that is essentially a destroyed camera. It’s not even worth considering to ever do this and you never should, especially abroad on strange currents.

CHARGING ADAPTER

Honestly, to heck with that long charging cord that ships with your battery charger. Purchase one or a few tiny RIGHT ANGLE ADAPTERS (BH, etc.) for your battery charger! So much nicer to use and travel with!



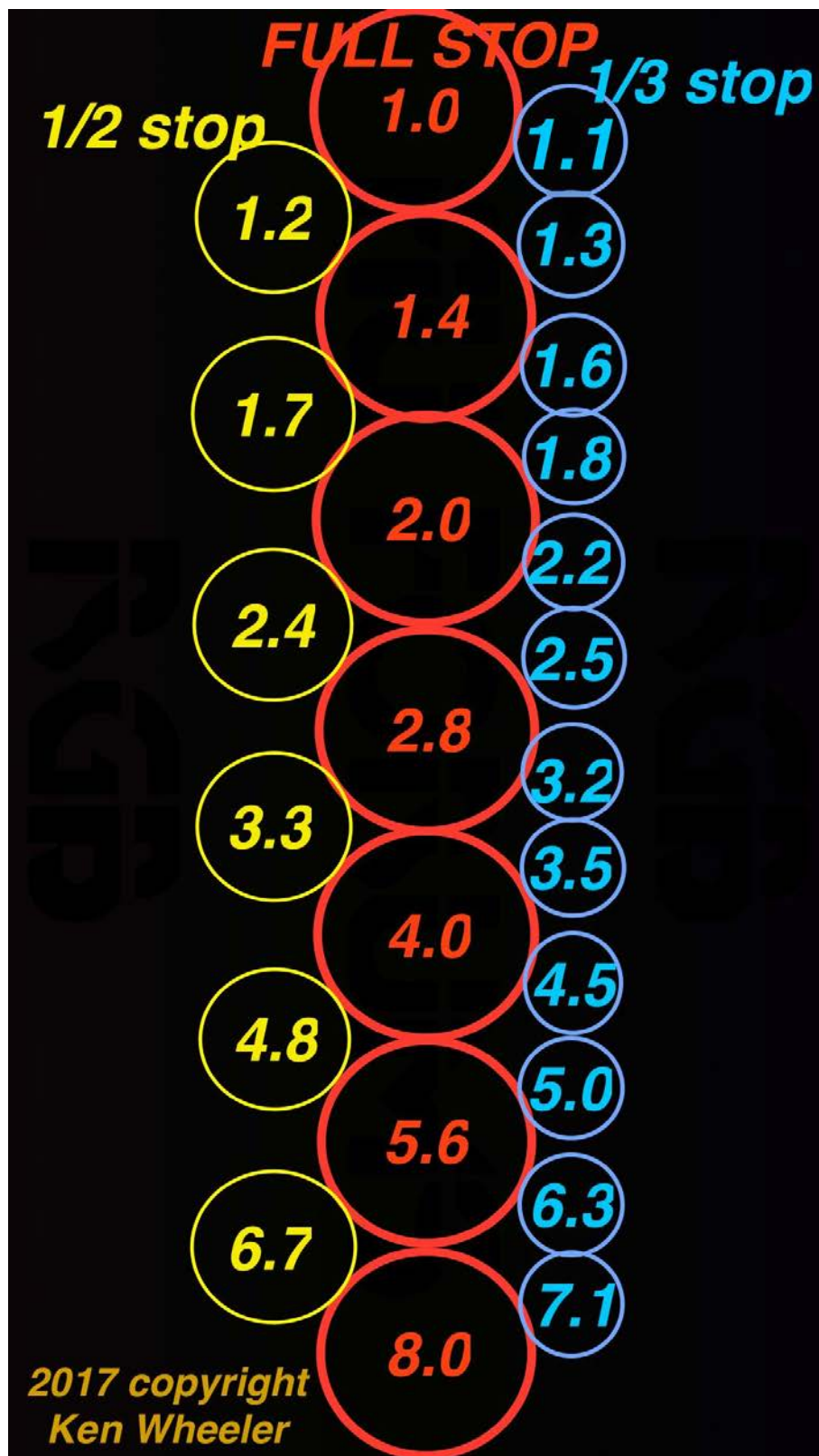
USE A BLACKRAPID FASTENR TO KEEP CAMERA BASE OFF ROUGH SURFACE

To keep the bottom of your camera off very rough surfaces and to protect the base from excess scratching, leave a Black Rapid FASTENR on the base of your camera. Additionally so this acts as an ever-ready attachment point for your camera strap when heading out.



F STOP INCREMENTS CHART

Since there is not a single good F-stops chart I thought I would create a useful one. Enjoy.





WHAT THE X-T4 IS (AND ITS AWESOME!)

Before getting into the tricks and tips of the X-T4, I would like to define, in short, what the X-T4 is relative to its priors. At the outset I would like to comment that the X-T4 has essentially the perfect ergonomics halfway between that of the X-T3 and of the X-H1. Necessarily so the X-T4 must be taller and thicker due to the larger battery, its compartment, and primarily due to the IBIS mechanism which, while thinner than that found inside the X-H1, makes the X-T4 necessarily thicker.

The X-T4 has as its primary features, essentially twice the video custom functionality of its prior X-T3, a new 2X longer life shutter mechanism assembly. With 5 point spring suspension of the shutter mech. like that of the X-H1, but different. IBIS for stabilization which is both improved and great for video use and using older adapted lenses. A fully articulating display, nearly twice the battery life with a much larger newer battery. Superior buffer clearing and a higher FPS rate making the X-T4 an amazing camera for serious sports action and wildlife photographers, including it being ideal for photojournalism! Improved AF tracking and -6EV low light AF capabilities.

In short the X-T4 is the single do-it-all jack of all trades and master of all trades camera that Fujifilm has ever produced easily fulfilling the needs of nearly everyone regardless of what they shoot.

The figure displays three side-by-side screenshots of the Canon EOS camera menu systems, labeled X-T2, X-T3, and S/R from left to right.

- X-T2 Menu:** Shows the main menu categories: SHOOTING SETTING, FLASH SETTING, DRIVE SETTING, SELF-TIMER, INTERVAL TIMER SHOOTING, SHUTTER TYPE, IS MODE, ISO AUTO SETTING, MOUNT ADAPTOR SETTING, and WIRELESS COMMUNICATION. A red box highlights the MOVIE SETTING menu, which includes MOVIE MODE, MOVIE AF MODE, HDMI OUTPUT INFO DISPLAY, and 4K MOVIE OUTPUT.
- X-T3 Menu:** Similar to X-T2, it shows the same main categories. The MOVIE SETTING menu is also highlighted with a red box, containing MOVIE MODE, MOVIE COMPRESSION, FILM SIMULATION, F-Log & W.ADJ., WHITE BALANCE, DYNAMIC RANGE, HIGHLIGHT TONE, SHADOW TONE, COLOR, SHARPNESS, NOISE REDUCTION, INTERFRAME NR, F-Log RECORDING, PERIPHERAL LIGHT CORRECTION, FOCUS AREA, MOVIE AF MODE, AF-C CUSTOM SETTING, FACE/EYE DETECTION SETTING, AF ASSIST, FOCUS CHECK, 4K MOVIE OUTPUT, FULL HD MOVIE OUTPUT, HDMI OUTPUT INFO DISPLAY, 4K HDMI STANDBY QUALITY, HDMI REC CONTROL, ZEBRA SETTING, ZEBRA LEVEL, AUDIO SETTING, TIME CODE SETTING, TALLY LIGHT, and MOVIE SILENT CONTROL.
- S/R Menu:** Shows the main menu categories: MOVIE SETTING, IMAGE QUALITY SETTING, MOVIE MODE, FILE FORMAT, MOVIE COMPRESSION, FULL HD HIGH SPEED REC, F-Log/M.C.G. MAGNIFICATION, 4K MOVIE OUTPUT, FULL HD MOVIE OUTPUT, HDMI OUTPUT INFO DISPLAY, 4K HDMI STANDBY QUALITY, HDMI REC CONTROL, IS MODE, IS MODE BOOST, FOCUS AREA, ZEBRA SETTING, MOVIE OPTIMIZED CONTROL, TALLY LIGHT, SELECT CUSTOM SETTING, EDIT/SAVE CUSTOM SETTING, WIRELESS COMMUNICATION, AS/AF SETTING, FOCUS AREA, MOVIE AF MODE, AF-C CUSTOM SETTINGS, AF ILLUMINATOR, FACE/EYE DETECTION SETTING, AF ASSIST, FOCUS CHECK, INSTANT AF SETTING, DEPTH-OF-FIELD SCALE, AF RANGE LIMITER, TOUCH SCREEN MODE, and FOCUS CHECK LOCK.

GET THE DUAL BC-W235 CHARGER

Since the X-T4 does not come with an external charger, I very highly recommend getting the FUJIFILM BC-W235 Dual Battery Charger. Likewise as mentioned elsewhere in this book, I cannot agree with charging it across the main board of the camera via the USB port of any camera; this introduces unnecessary potential dangers to the camera from spurious power spikes etc. Further still not having an external charger handicaps the photographer who **MUST** time-out his camera to charge the batteries and this is not acceptable. This is a wholly new battery system and there is no charger with the camera, so purchase of this external charger is not would I would define as recommended, but rather is absolutely necessary.



X-T4 BATTERY LIFE INDICATOR

The X-T4 is the first in the T series to incorporate into the menus a battery age/life indicator readout. This however only measures the AGE of the battery due to number of charge cycles. The **HEALTH** of your battery is the only real consideration you need to make on taking care of lithium batteries. To learn how to take care of your X-T4 battery, see section in this book titled ***“LITHIUM BATTERY BEST-CASE CARE FOR LONGER LIFE”***



VERTICAL GRIP & WHY?

You do not need the vertical grip with the X-T4 to get the most out of its features, but its nice for a lot more battery power and ease of portrait orientation use. Further more the added weight actually adds stabilization to the camera for its use in both photography and video use. By contrast, in the case of the X-T2 & X-H1 you need the grip for boost mode and other extra features.



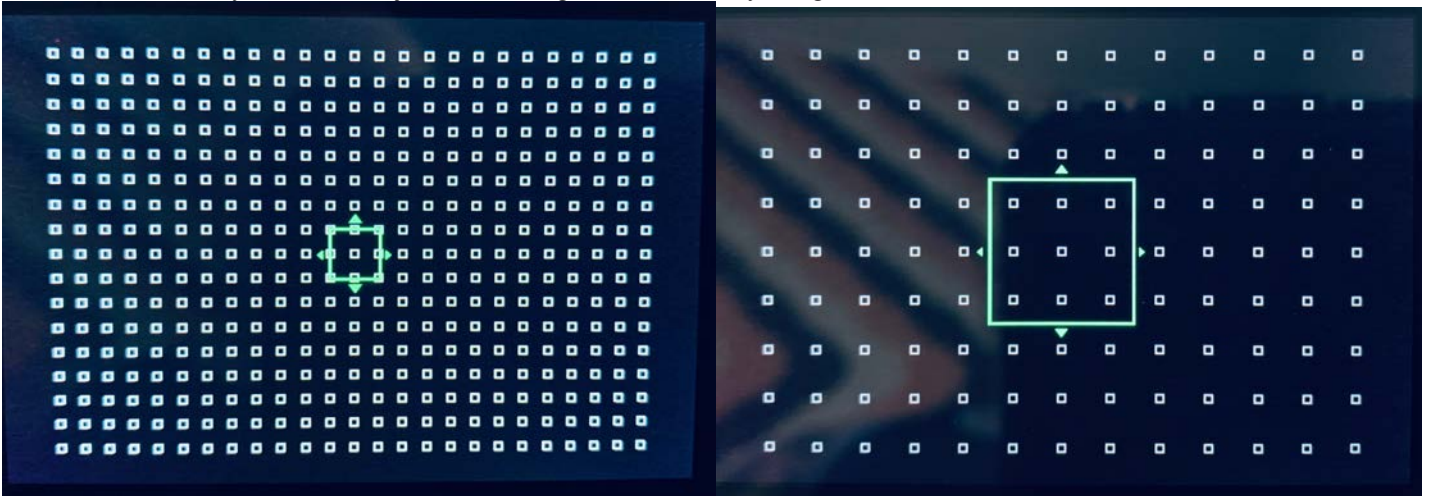
X-T4 NEEDS YOUR ATTENTION TO PERFORM THE BEST!

Your X-T4 requires your attention to set the AF type & mode parameters so its performance can be maximized for your intention of its best usage! The best tools all require the proper knowledge of how to use them and what to do with them and when. Please refer to the **AUTOFOCUS TIPS** section of this book to learn the maximum ways in which to set the AF parameters of your X-T4 to get the most out of what it can do for you! In extensive testing of action with the X-T4, I found it to be a ‘beast’ with a superior hit rate for fast action AF.



X-T4 WITH WIDE AREA MODE IS EXPANDED

Thanks to new artificial intelligence algorithms in your X-T4, the before now little used WIDE AREA AF has a renewed life. Since the X-T4 has subject tracking using color & more, you are far less confined with the X-T4 to use a “to fit” single and zone area AF boxes! Test it out for yourself on subject AF tracking with the X-T4 by using the WIDE AREA mode!



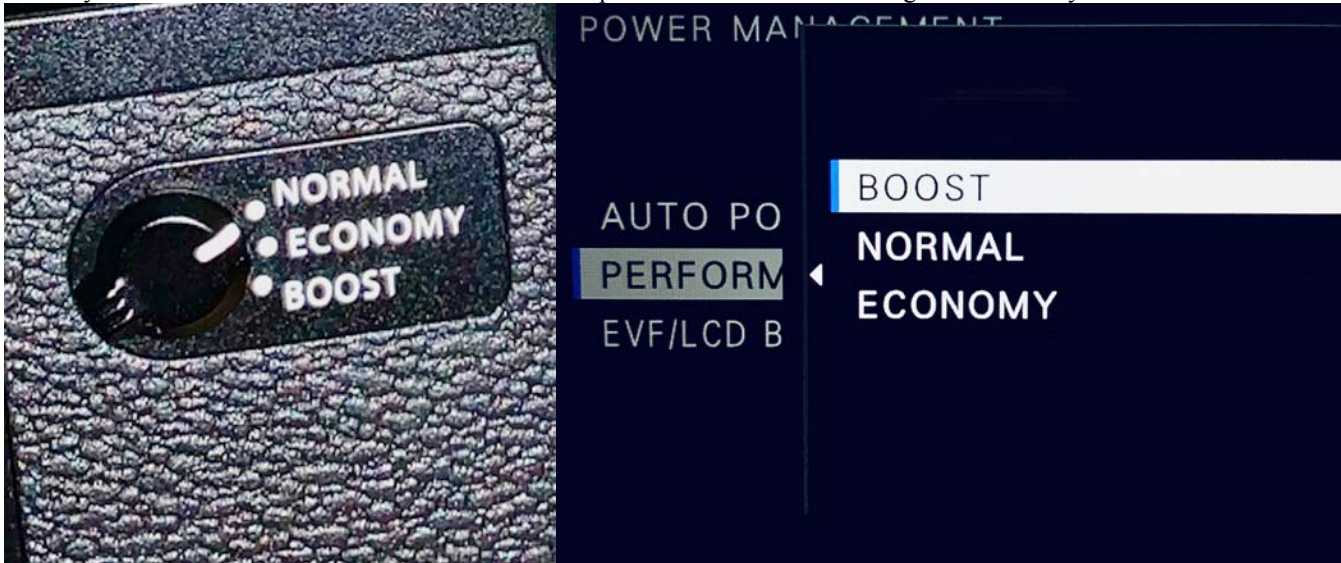
NORMAL, BOOST & ECONOMY. WHEN & WHY? WHAT ARE THEY EXACTLY ON THE X-T4?

<https://www.youtube.com/watch?v=KcUpuyalCvQ>

The X-T4 does not require the vertical grip to take advantage of the boost modes. Modes? Yes there are three different varieties of boost also, rather specifically boost-subsets. See images below and video link above for more detailed specifics. The “economy” mode should really be called the “power saver mode” for clarification. When the X-T4 is in economy setting the EVF goes into, after a few seconds, a power miser state, such that the EVF drains as little power as possible. Boost itself is of course for TOP performance use, but it likewise has three sub-categories of EVF priority, resolution LCD priority, and EVF frame rate priority.

Respectively, to keep it simple, you have:

1. NORMAL, which is normal function with no respect for peak performance NOR for power saving.
2. ECONOMY is peak power saving, which would of course make it LESS THAN NORMAL MODE in respect to operation, perfect for landscape, stills, architecture, portraiture etc.
3. Lastly of course BOOST MODE which is maximum performance with 3 sub-categories to set as you see fit.



PERFORMANCE

Select **BOOST** to improve focus and viewfinder display performance.

Option	Description
BOOST	Boost camera focus and viewfinder display performance. The battery drains faster than when is NORMAL selected.
NORMAL	Choose for standard focus and viewfinder display performance and battery endurance.
ECONOMY	Limit autofocus and viewfinder performance. This option offers better battery endurance than does NORMAL .

EVF/LCD BOOST SETTING

Adjust the behavior of the EVF and LCD monitor when **BOOST** is selected for **PERFORMANCE**.

Option	Description
EVF/LCD LOW LIGHT PRIORITY	Display brightness is adjusted to make subjects in shadows easier to see. Motion blur may cause ghosting.
EVF/LCD RESOLUTION PRIORITY	Display resolution is increased to make details easier to see.
EVF FRAME RATE PRIORITY	The refresh rate for the EVF is increased, smoothing motion.

Number of shots		
PERFORMANCE	LCD	EVF
BOOST	Approx. 480	Approx. 450
NORMAL	Approx. 500	Approx. 500
ECONOMY	Approx. 600	Approx. 570

Number of shots (VG-XT4 vertical battery grip)		
PERFORMANCE	LCD	EVF
BOOST	Approx. 1350	Approx. 1300
NORMAL	Approx. 1450	Approx. 1450
ECONOMY	Approx. 1700	Approx. 1600

Motion in the viewfinder or monitor appears jerky rather than smooth.

When **ECONOMY** is selected for **PERFORMANCE**, the frame rate will drop if no operations are performed for a set period. The normal frame rate will be restored after you operate camera controls (📖 232).

X-T4 FULLY ARTICULATING SCREEN

Good news, the fully articulating screen on your X-T4 is fed power and information by a wholly different cable system than the flexicable which is used only nearly all other kinds of digital cameras. This type of cabling to the LCD makes the X-T4 more weather resistant, is tougher and less fragile, and doesn't require a hole/slit in the back of the body back-plate which protects the main board from humidity and corrosion.



X-T4 EYECUP IS NEW & UNIQUE

The X-T4 eyecup is different than its priors, it has two interlocking points that retract when you press in both sides of the eyecup for removing it for cleaning or replacement. Please note that you CAN USE THIS NEW EYECUP on prior models (I have tested this myself), X-T3, X-T2, X-H1 as a replacement, **but you CANNOT USE THE PRIOR EYECUPS for those OLDER CAMERAS on this newer X-T4**



X-T4 TOP PLATE

The X-T4 new and important considerations are to get yourself several (because you will lose them!) screw in shutter release buttons of your favorite color and style, get the cheap ones on Ebay, don't buy expensive ones. Secondly note that now you have a nice new puffy AF-ON button to use if you wish, and further more now two wholly different menus, STILLS, and MOVIE. No longer are there video functions in the menus among everything else, rather MOVIE settings now have their own unique menu!

You will note that this STILLS/MOVIE sub-dial has removed the PHOTOMETRY (metering) wheel, which was in its place. It's a great idea now to assign a button for photometry and or quick access in the Q MENU!



X-T4 HEADPHONE JACK DONGLE

The X-T4 camera-only uses and contains a USB-C to headphone jack dongle for monitoring your audio. Don't lose this dongle, however it's a standard dongle and replacements can hand for \$10+. If you purchase a vertical grip for your X-T4 a conventional headphone jack is next to the battery tray door.



X-T4 NP-W235 NEW BATTERY

The X-T4 camera has a new 2200mAh battery, which has a much higher capacity than all prior Fujifilm X series camera batteries. This is both good and a small issue in that you need to buy several new copies of this battery since none of the older ones will work. So your new X-T4 should have at least 3-4 spare batteries minimum that you should buy. Buy some spare X-T4 batteries!

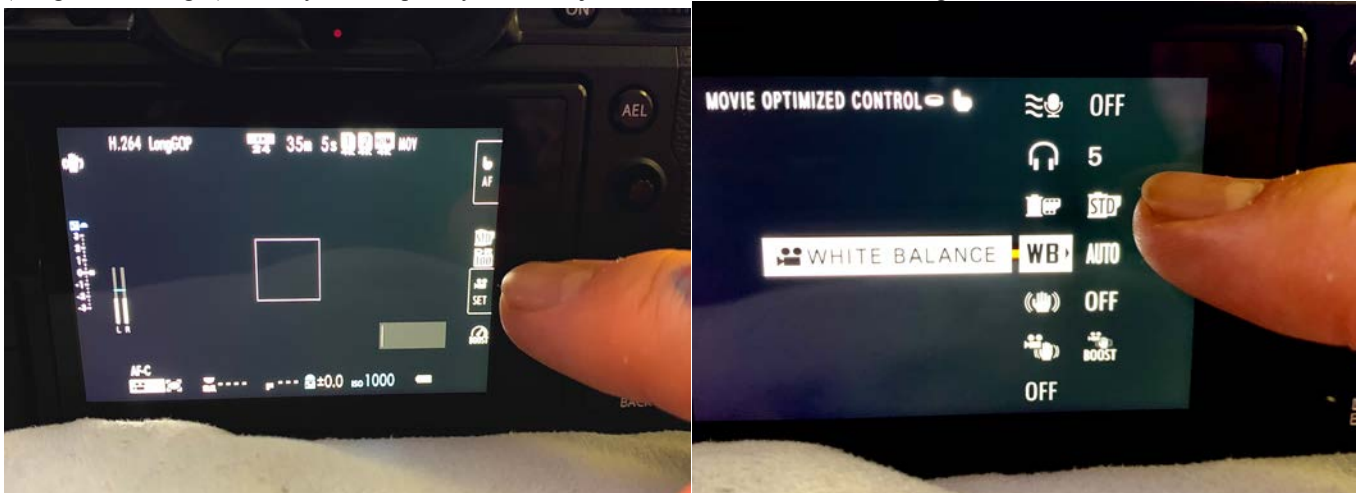


X-T4 IBIS IS ALWAYS AND FOREVER ALWAYS ON. PERIOD!

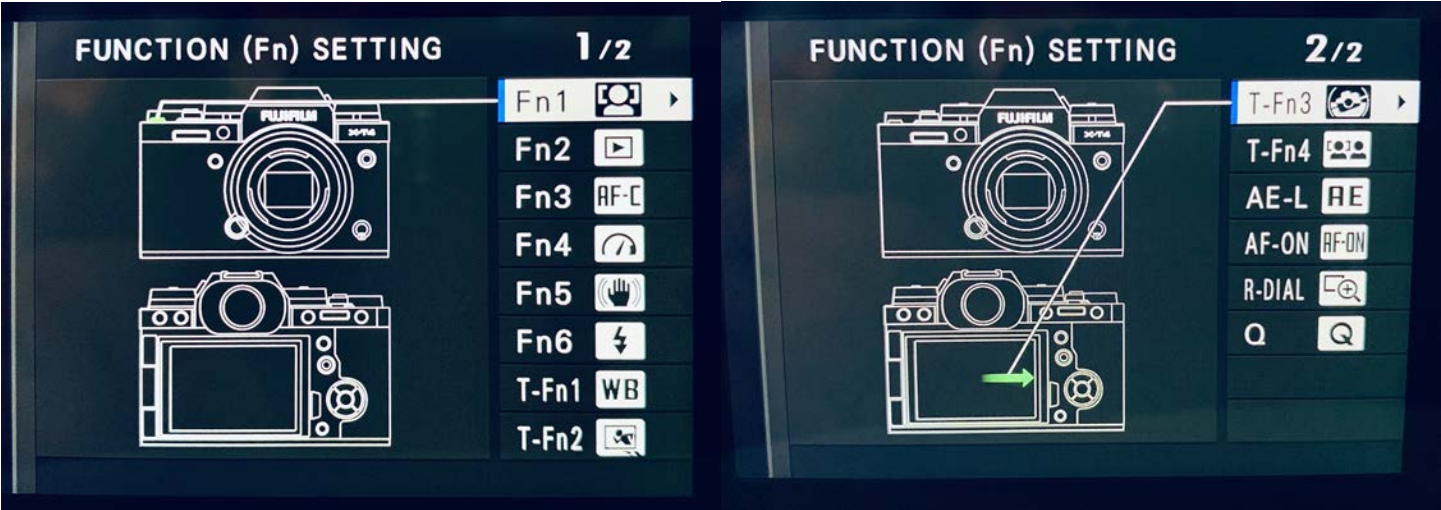
Even with IBIS OFF selected, with the camera on, IBIS is ALWAYS ON when the camera is on, even if it's set to "OFF" in the menus. IBIS stabilization is ACTIVE shake correction when set to ON. IBIS stabilization turned "OFF" is STILL a fully active 'hold-lock' (not physical, rather magnetic) of the sensor in its respective magnetic hold.

X-T4 MOVIE MODE TOUCH FUNCTIONALITY FOR SETTINGS

The X-T4 camera in MOVIE MODE has a unique TOUCH functionality that is great to use! Make sure you turn on your touch functions in your menu, then on the back of the LCD (see image at left below) touch the SET, then you will get a scrolling screen (image bottom right) where you can quickly access adjustments for custom video settings.



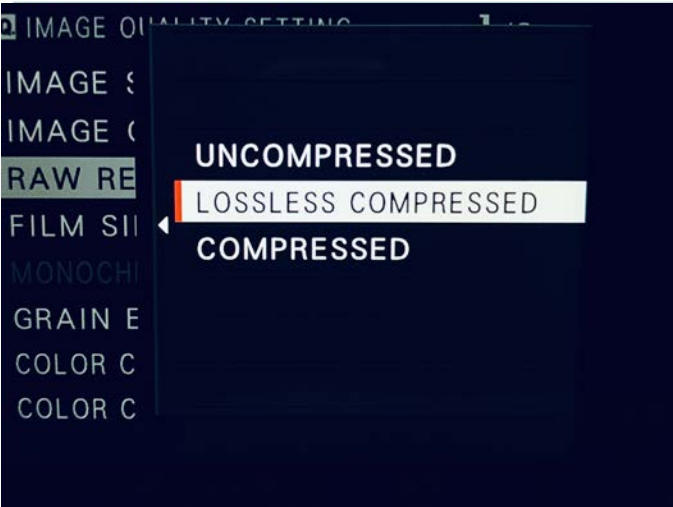
ABSOLUTELY THE MOST IMPORTANT THING TO SETUP ON YOUR FUJIFILM X-T4 CAMERA!
Definitely the most important thing to first do with your new X-T4 is setup your function buttons and swipe function customizations. My absolute favorite is shown below. To enter this (quickly) you hold down the DISP/BACK button for a few seconds and then you enter the custom functionality (button and swipes) menu to change the as you pick for your camera.



THE OFFICIAL WAY TO CLEAN THE IBIS MOUNTED SENSOR INSIDE YOUR X-T4 (same as the X-H1)
In case you are wondering, this is the official word from Fujifilm themselves also. Since the sensor inside the X-H1 is mounted on a moving IBIS mount, there are special considerations for cleaning it. With the camera off the sensor assy. jiggles around freely and this is NOT an allowance for cleaning, so the camera must be on, but also other considerations listed here below. Even with IBIS OFF selected, with the camera on, IBIS is ALWAYS ON when the camera is on, even if it's set to "OFF" in the menus. **Follow these steps before cleaning:** 1. In menu settings turn OFF "shoot without lens". 2. Turn OFF "IS MODE" 3. Turn ON "ES" (electronic shutter) 4. Before cleaning make sure the camera is ON. 5. Now you can clean the sensor like you would any other sensor. Refer to the sensor cleaning section of this book on the specifics of how to clean.

FILE SIZES: UNCOMPRESSED, LOSSLESS COMPRESSED, AND COMPRESSED
The X-T4 has the new feature of COMPRESSED as an option, which is a lossy algorithm for image saving that saves on SD card space and buffer clearing. In MOST instances nothing would be noticed in the image and this is ideal for high-speed sports, action, wildlife use and especially photojournalism. This however should NOT be used for BEST IMAGE OUTPUT in cases such as portraiture, landscape, and anywhere highest dynamic range and image fidelity is desired!

COMPRESSED	RAW images are compressed using a "lossy", non-reversible algorithm. Quality is about the same as UNCOMPRESSED, but files are anywhere from about 50 to 70 percent smaller.
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THAT FANCY X-T4 FULLY ARTICULATING DISPLAY!

The X-T4, as you know, has a fully articulating display, with lots of benefits for use, including video selfie display and likewise has a much more robust weatherproof feed/power construction than the flexicables used by prior models. Further more, I myself (especially outdoors) use the large and wonderful Fujifilm EVF display for image review and almost never use the LCD display for image review. It is good to use the LCD display flipped inwards for the no-smudge, low profile use of the X-T4 as seen below.



THOSE NEW X-T4 SPLIT RING COVERS

The X-T4 is the first (thank you) Fujifilm camera use the new split ring covers (same as Nikon) to keep the triangular split rings from banging up against the metal upper plate of the camera removing both the possibility for scratches but also eliminating the need for (I cannot stand them personally) the felt pads that came with all prior cameras (including the X-T4, however it does not need them now because of these covers).



THAT NEW X-T4 SHUTTER MECHANISM

The X-T4 shutter mechanism is not only very quiet but also gives up to 15FPS burst speed. However importantly the X-T4 shutter is rated for DOUBLE that of the X-T3 and X-T2 which are rated for 150,000 actuations (none of this includes images taken using the electronic shutter feature option). The X-T4 shutter is rated for 300,000 cycles.

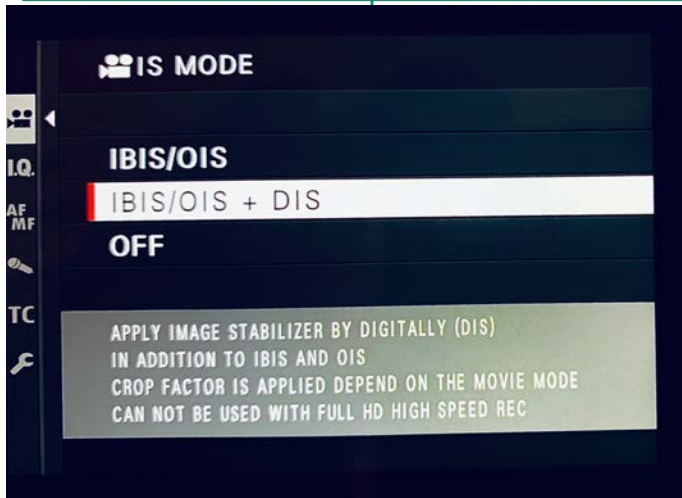


X-T4 MOVIE MODE TRIPLE STABILIZATION!

The X-T4 in video mode has the capability of combining IBIS, lens (OIS) stabilization and digital (DIS) stabilization all at the same time for an ultimate gear-free (less gear!) & gimbal free selfie etc. video recording. This DIS stabilization option samples the sensor on the X-Y coordinate movement or shake; IBIS takes care of most of this on a multiple set of axis coordinates. Use the IBIS/OIS + DIS for maximum stabilization when and where excess gear is undesirable, such as out in the field making video segments.

IBIS/OIS + DIS

Enable in-body (IBIS), optical (OIS), and digital (DIS) image stabilization. The crop is adjusted according to the option selected for **MOVIE MODE**.



X-T4 HDR MODE IS USEFUL

The X-T4 has an option on its sub-dial for high dynamic range (HDR) which quickly takes 3 images and combines them in-camera and saves them to your SD card. You have the option of AUTO, and choices between 200 and 800+%. These 3 near-instant exposures are made above and below the determined “accurate” exposure and then combined for the best shadow and highlight exposure. Since three shots are being combined, subject motion and wind is an important consideration to be mindful of. But for handheld HDR photography, this is an excellent option.



FUJIFILM X100V TRICKS & TIPS



WHAT THE X100V IS

The X100V is (as form follows function of course!) a stealthy powerful street, general use, and travel camera. It can be engaged to run completely silent. It has a built in real ND filter, and likewise a leaf shutter which means it can use ANY STROBE OR SPEEDLIGHT if it be for Fujifilm or not for Hypersync (not HSS!, Hypersync is far superior to HSS) flash photography. Likewise too the “tiny” little flash on the X100V is much more powerful (in effect!) than other such tiny flashes because there is no need for pulsing light for higher shutter speeds above sync speed.

The rangefinder style digital design of the X100V and its hybrid finder is optimally useful for street, candid, perfect for low-key use and also perfect for general travel and simplex smaller videos while on the go. Now with a much sharper lens (much so!), larger viewfinder, and updated sensor, the X100V is the ‘stealthy street beast’ many photographers have long wished for. Now with articulating display and improved functionality the X100V is the best fixed lens camera out there. Powerful yet unassuming, silent yet captivating, stylish yet fully featured and extremely functional, the X100V is the fixed lens standard which others are measured against.

X100V THE 'FAST & LAZY' METHOD FOR APERTURE PRIORITY FULL CONTROL

<https://www.youtube.com/watch?v=k7Euqqcp-Uw>

See the video in the link above for a complete description of this setup, but in simple (also picture below left), by placing your ISO wheel to C (command) and your shutter speed dial set to A (automatic), your exposure compensation dial set to C, and your aperture ring set to A, (make sure your COMMAND DIAL SETTINGS in your Settings> COMMAND DIAL SETTINGS is set to 1: F 2. Exposure compensation 3. ISO and rear command factory default), and lastly your Settings APERTURE RING SETTINGS> COMMAND, you then have one button (front command dial press) command which switches between, aperture, exposure compensation, and ISO.

This is very fast for changing settings in aperture priority without having to turn ANY DIALS AT ALL! There is no faster means of having aperture priority (where most professionals use their cameras) access to full control of most all your settings with the Fujifilm X100V!



MAKE YOUR X100V GO FULL ON STEALTH!

It is shocking how few people use this feature and even more that do not know it even exists, but your X100V can go fully silent and flashless. Perfect for indoor and street photography. I have this set as a Q MENU option to quickly engage when needed! USE IT! You can find this in your Settings > USER SETTINGS

SOUND & FLASH

Select **OFF** to disable the speaker, flash, illuminator, and self-timer lamp in situations in which camera sounds and lights may be unwelcome.

BUY THE FILTER ADAPTER AND LENS HOOD KIT FOR YOUR X100V

For full weather sealing of your X100V, purchase of the LH-X100 (this is the model in black, a silver version also too exists) is necessary, additionally you will need to purchase a filter to screw onto the adapter ring after unscrewing the cameras factory ring on the end of the lens. I recommend the 49mm B+W Multi-coated (AR COATING) UV filter for sealing and protection of your front lens element!



FAST SD CARDS FOR YOUR X100V ARE NECESSARY!

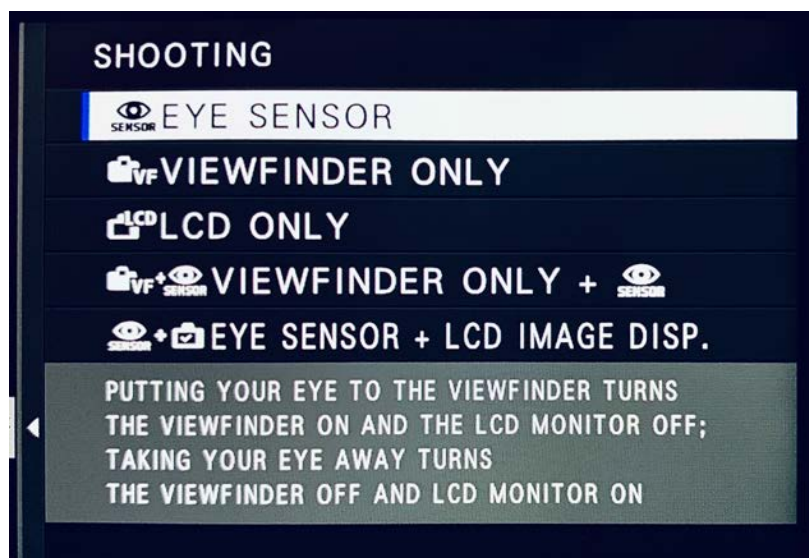
You wouldn't put cheap gas in your new hot rod car, nor should you put SLOW SD cards in your new X100V camera! Nobody wants or likes buying the "more expensive" SD cards for your camera, but it really is necessary, at the very minimum buy no less than 170MB/s SANDISK (I recommend only buying SanDisk cards and get real ones from ONLY genuine retail camera outfits online or elsewhere, never Ebay, most of which there are fakes), but the best are 300MB/s cards by SanDisk. **This is a NECESSITY FOR VIDEO RECORDING! Why?** Because slow cards cause a data transfer bottleneck that can generate excess heat and camera heating for longer video recording. But this fact goes for any camera, not just the X100V.



X100V SETTING A VIEW MODE FUNCTION TO A BUTTON

<https://www.youtube.com/watch?v=bL3fUoNMHHc>

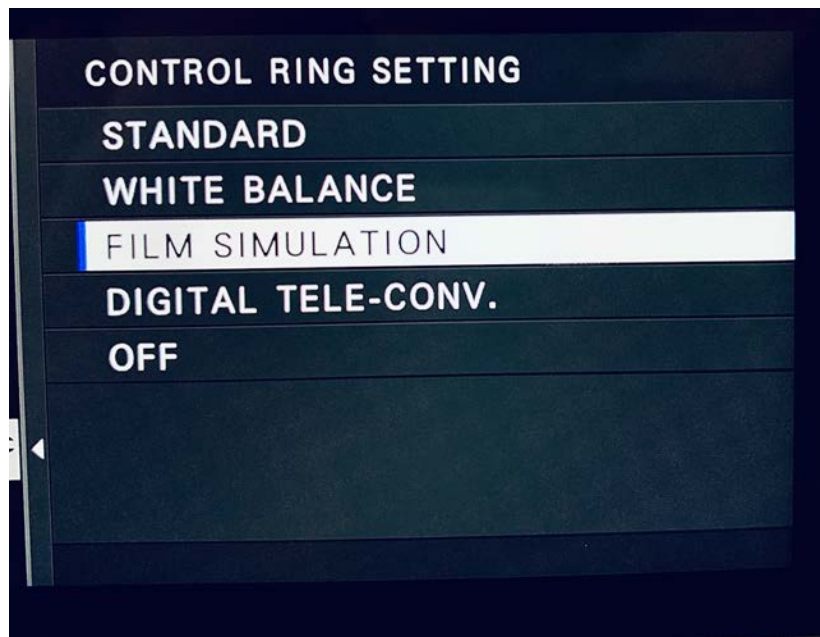
The X100V no longer has a VIEW MODE button next to the viewfinder, I myself have set this as a custom function to the button just to the right of the shutter release on top! Importantly as you see below in the image and in the video link above, the X100V has new VIEW MODE functionality for different options. I typically use VIEWFINDER ONLY + EYE SENSOR which is a power saver mode where nothing is displayed unless and until I put my eye next to the viewfinder. Please explore ALL these options since some are new and pick what suits your usage best!



X100V CONTROL RING AS A FUNCTIONALITY OPTION

<https://www.youtube.com/watch?v=AvCwNon-TrI>

A great “function button” alternative that I use is the actual control ring (some call it the focus ring however) which is forward of the aperture ring on the X100V. As you can see below you have the option of what to set this to, it DOES NOT override the AF+MF setting that most of us have for AF override for focus peaking while half pressing the shutter release. With a quick nudge of the ring, this (in my case, FILM SIMULATION) menu option pops up to let me change this desired setting very quickly! Also too see the video link above if you need more detailed visual of this working.



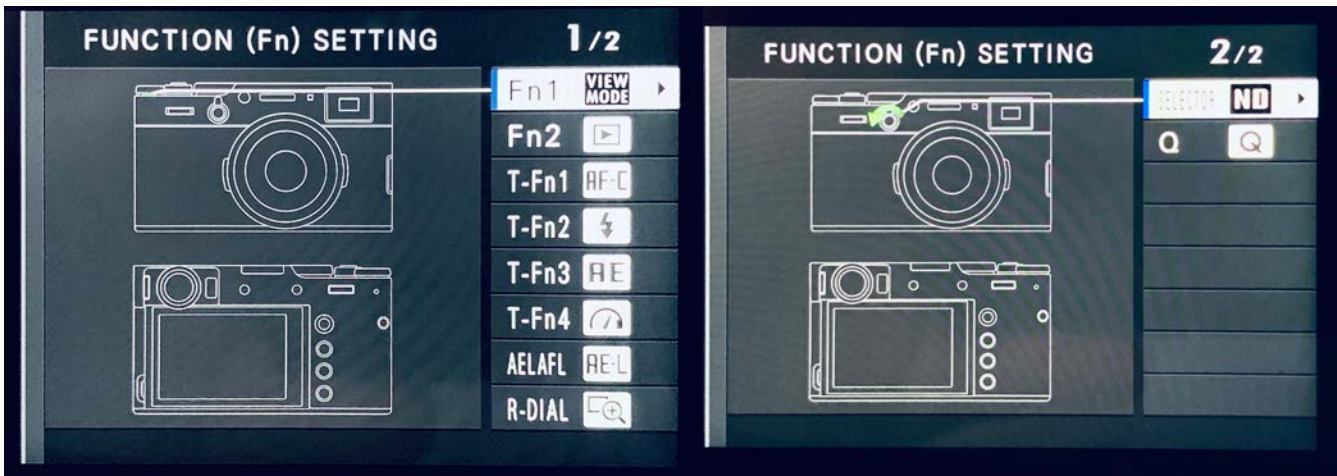
WRIST STRAP FOR YOUR X100V

The best accessory for your X100V, which is primarily a street and travel camera, for you to make (since you cannot buy one like this!) and is so darn useful (its easy to make too!) is a hand strap. You can use leather, or nylon webbing, the fast and easy way is to cut up an old nylon camera strap and also use its “tails” for the looped ends. Make sure the wider hand strap portion is cut to the farthest end of the edge of the inside of your hand from between your index finger and thumb to the other side ‘edge’ of your palm, and add just another $\frac{3}{4}$ ” for comfort. Cut a slit on either end about $\frac{1}{2}$ ” in from the ends and use those slits for the nylon “tails” to attach to the triangle split ring to the Black Rapid link on the bottom (see image bottom right). Make sure the link is the older one so the door is not occluded. To make this super-fast, you can use braided cordage to make the hand strap, that is, if like me, you want it done fast and lazy!



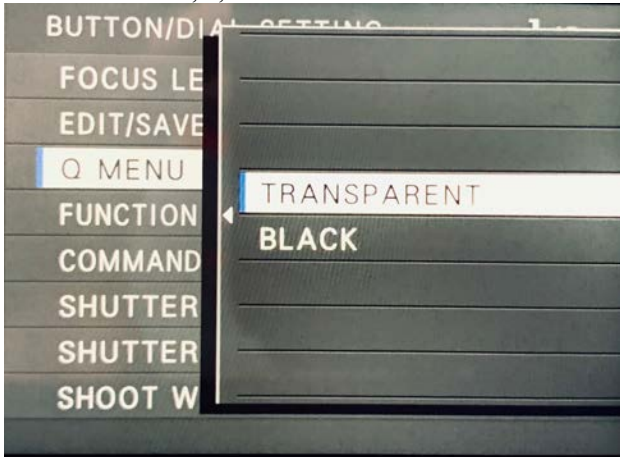
X100V CUSTOM FUNCTION BUTTON & SWIPE POSSIBILITIES

The X100V, like all other Fujifilm cameras has its own custom function assignments you should importantly consider. This is very subjective on what you choose, but mine are posted below! Make sure you put YOUR most important functions here to keep from going into the menu system as little as possible.



THE X100V HAS NEW Q MENU CUSTOMIZATION OPTIONS

The X100V has the wonderful new Q MENU feature which lets you change the Q menu from black like all other Fujifilm cameras to transparent, so you can monitor what is going on in front of the lens while you quickly make changes via the Q menu. Further more, I have never seen a need for 16 options in the Q menu, its just too many! With the regular function and swipe optioned picked, I only need myself 4 to 6 options for changing (the less important things) in the Q menu; now you can change the Q menu from 16 slots down to either 12, 8, or even 4!



[FUJIFILM X-PRO3 TRICKS & TIPS](#)



WHAT THE X-PRO3 IS

What if we could re-skin the X-T3 sensor, the image engine along with its speed and performance and change its form factor to that of a very classy digital rangefinder style camera with a top and bottom titanium plate and a high performance hybrid viewfinder? We then would have this, the X-Pro3! Let us not also forget the top sub-display of the X-H1? Where to put it? On the back of the LCD display. Very handy and always visible even when the camera is off. Form follows function, and while some have squeaked about (rather against) the inward facing LCD display, the truth is the X-Pro3 is exactly what it is designed to be, a mean fast, high performance digital rangefinder like none other, outstripping that of its former, the X-Pro2. Add in -6EV low light focusing and that wonderful low light BSI sensor and you have something magical in the X-Pro3, I love it!

The LCD on the X-Pro3 is the most smooth & buttery display I have ever laid my eyes upon. Even though the sensor and image engine are the same on the X-Pro3 as that of the X-T3, I love my X-Pro3 all the more so because of what it IS, which is not something you will not find on a spec sheet! I am very biased, I truly LOVE the X-Pro3! There is nothing that comes even close in the camera world to the X-Pro3 in the rangefinder arena.

THE X-PRO3 VIEWFINDER WINDOW

You will get fingerprints and dust on the X-Pro3 viewfinder window. This glass is AR coated and to clean it, simply use a dampened Q-tip with clean water (not wet! Dampened) and use the reverse dry side in circular motions to dry it off. In the case (most often so!) of hand oils and smudges, you can use 70% rubbing alcohol dampened Q-tip, then remove, then finish off with a dampened Q-tip with clean water then dry.

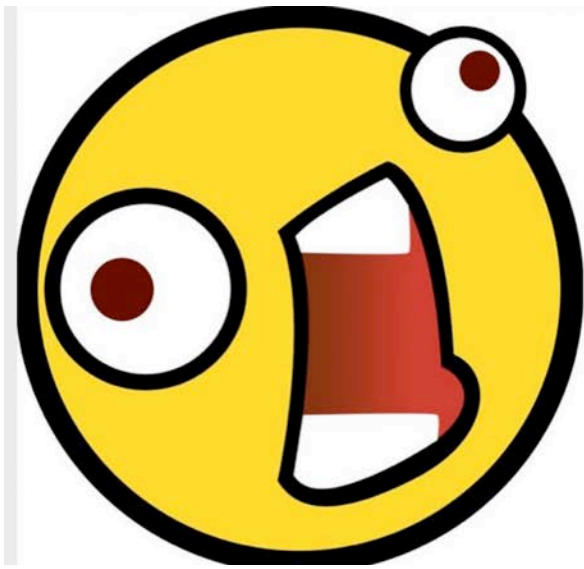
AR coatings ARE AFFECTED by acids in your skin excretions, and fingerprints SHOULD BE REMOVED in a timely manner from this window and now allowed to remain for long periods of many days and weeks!



THE X-PRO3 RUMBLINGS ON THE LCD DISPLAY

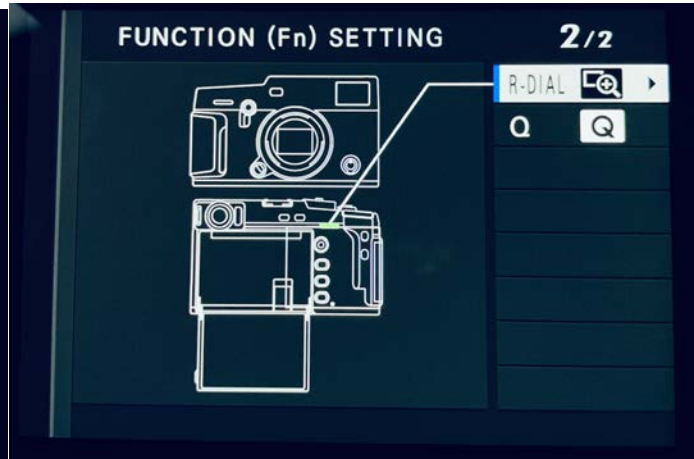
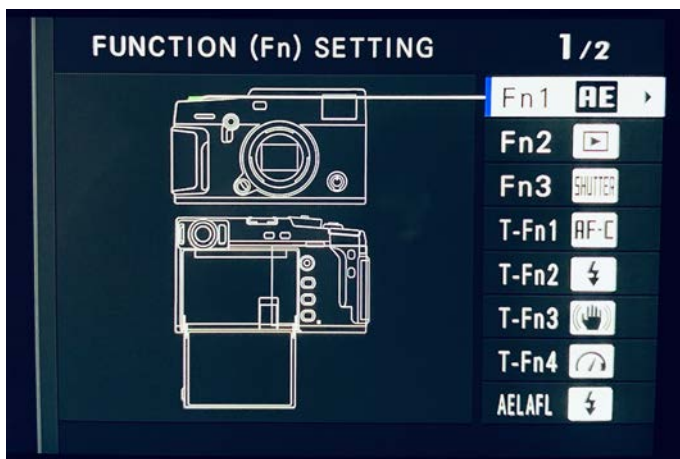
When the X-Pro3 was introduced, there were many rumblings about the fact that the LCD is inwards facing rather than outwards like that of all Fujifilm cameras including the X-Pro2, however as I have said 1000X, form follows function and the X-Pro3 is not designed or intended to mimic the form of the X-T3, or any other Fujifilm camera, including it being a more purist rangefinder digital camera which the X-Pro2 was evolving into anyway.

The fact is that I can chimp off an image I just took MUCH FASTER thru the EVF (where my eye already is!) by pressing the PLAYBACK button (which I assigned to the front button function of the X-Pro3), than I can by removing my eye from my X-T3 for example, hitting playback, and looking at the LCD display. The X-Pro3 is a minimalist-type stealthy high quality street and travel camera, and not a single X-Pro3 user has any issues with the full use of the X-Pro3 from the inwards facing LCD display. Different styles of Fujifilm cameras exist for the same reasons as there are different flavors of ice cream, there is "one out there for everyone!"



ABSOLUTELY THE MOST IMPORTANT THING TO SETUP ON YOUR FUJIFILM X-PRO3 CAMERA

Definitely the most important thing to first do with your new X-Pro3 is to setup your function buttons and swipe function customizations. My absolute favorite is shown below. To enter this (quickly) you hold down the DISP/BACK button for a few seconds and then you enter the custom functionality (button and swipes) menu to change the as you pick for your camera. Below are my ideal settings.



THE X-PRO3 SUB MONITOR

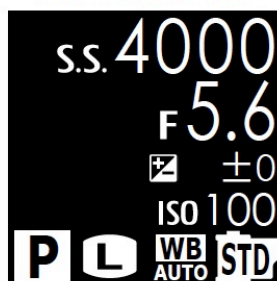
As I call it, the back display, just like the top display on the X-H1 and GFX100, you can customize it in the standard (most useful) setting by going to SCREEN SETUP > SUB MONITOR, and you have the option to customize it for both STILLs and MOVIE display. Below image is how I have my stills display set for viewing.



CLASSIC



STANDARD



FACTORY FUJIFILM X-PRO3 HAND-STRAP

The FUJIFILM Grip Belt GB-001 is perfect for use with the X-Pro3! It attaches to the bottom tripod socket and the right triangular split ring. Perfect for street and travel, and keeps you from accidentally dropping your X-Pro3, the GB-001 was designed for the X-T1 originally.



YOUR X-PRO3 VIEWFINDER SELECTOR

The one thing I notice people are very remiss to learn how to use fully is the viewfinder selector lever to switch between EVF, OVF, and ERF. Your EFF gives you're the optical viewfinder window but with a focus preview window. Your EVF is no different than any other Fujifilm camera view which is purely electronic imaging fed from the sensor itself. Lastly of course your OVF is purely optical view of your image with overlays (as much or as few as you like) showing you details of your camera and status features. Play with and practice going back and forth between these 3 and know subconsciously when and why to use each one.



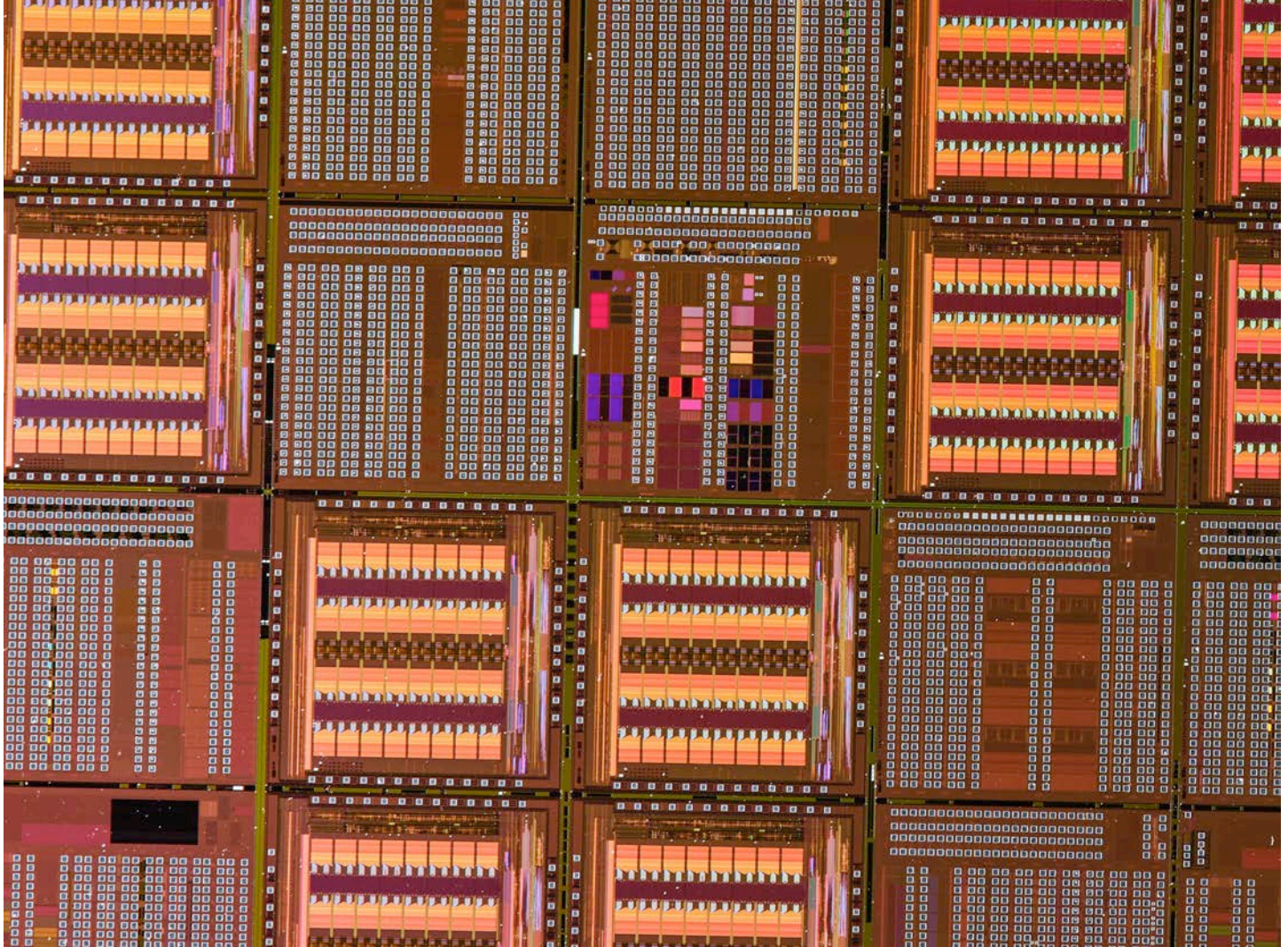
PRIMARY FUJIFILM CAMERAS, RATINGS, & FOR WHAT USE

THE NINE PRIMARY FUJIFILM CAMERAS

These are the nine primary Fujifilm cameras currently; I will expand this book as more cameras are added such as the X-Pro3. I own all nine of these and have used them extensively (unlike others who only rent them for a few days and opine on things of which they know not). I'd like to discuss what each of these is for, best for, best not for and draw an overview to help the reader on making a decision on them. There are of course many other (smaller) Fujifilm cameras but I cannot cover everything nor should I be expected to do so. Suffice these eight cover 90% of what a serious Fujifilm camera purchaser might consider.

FUJIFILM GFX100 A WORLDS FIRST (the Game-Changer!)

102 Megapixels with a macro lens is incredible. Nearly there to a microscope low power in abilities to zoom and the details!



102 Megapixels on the GFX100, the new BSI sensor with lots of dynamic range. Truly a photographers dream camera.



FUJIFILM GFX100 A WORLDS FIRST (the Game-Changer!)

GFX100 *PERFECT DUAL SCORE & VALUE!*

Observations: Worlds first IBIS medium format. Worlds first fast autofocus medium format, Worlds first hand held low light medium format camera. Worlds first crossover medium format! If you “inflated” the X-H1 and put in a medium format sensor, with some other improvements, that IS the new GFX100. With IBIS, leaf spring shutter release, and 4-point spring suspension on the shutter mechanism, the GFX100 is a “big brother” of the X-H1 in many ways in fact, it is an epic winner.

In short the GFX100 is a massive expansion of the bandwidth for the parameters of use of what medium format always has been, which is ultimate image output, but now greatly expanded into countless areas medium format was mostly a no go for. Forgetting the jaw-dropping detail packed 102MP sensor of the new GFX100, this is a revolutionary and absolute game-changer camera.

90% of what medium format was desirable to be used for, but was not, due to AF speed, and necessity for tripods, such as wedding ceremonies, ambient low light photography, street, event photography and more can now be filled by the GFX100 and its capabilities, and that is a huge boon for working professional photographers.

As a near perfect analogy, in the past and today we have cameras that are “cars”, fast and agile and are good enough for most all things, and we have medium format & large format “earth movers”, which are slow, and painful to use and are only used for one thing 99% of the time, and that is absolute pinnacle ultimate image output, for “hauling” the huge impressive image to the client. Now with the GFX100 we have a “SUV” that is both fast, agile, and can be used for really everything, and further more can really haul a LOT of image detail and quality to the shot for either the photographer or the client. The GFX100 is undeniably a new frontier of photographic image making possibilities.

Overall score out of 10: 10

Best used for: Portraiture, Street, Moderate action, Photojournalism, Video, Landscapes, Architecture, Macro, Product, Business, High Fashion. Anything where ultimate image output is the end goal.

Shortcomings /Not best for: NONE!

Value out of 10: 10



FUJIFILM GFX50S & GFX50R (The medium format image monsters)

GFX50S

Observations: The official studio beast and medium format camera, the GFX50S has the capability of a vertical grip and also too (separate purchase) the tilt adapter for the viewfinder which is an absolute must own, period! What sets the GFX50S apart from its little sister camera the GFX50R are not merely those two items but also the top display, and more function button interface availability & a second battery. Both the GFX50R and the GFX50S have the same sensor and image processing engine so the output is the same. However shutter dampening seems to be superior on the newer GFX50R. Tethered shooting is much more relaxed and easier with the GFX50S and I personally prefer larger cameras. In fact I've had the GFX50S in the field countless times, I love it; nor is it too big to pack around. You could almost consider the GFX50R to be the Toyota Camry and the GFX50S to be the Limousine, both with the same engine inside. The GFX50R has the DSLR ergonomics. Fully capable up to moderate action photography. **NOT for video use!**

Overall score out of 10: 9

Best used for: Portraiture, Landscapes, Architecture, Macro, Product, Business, High Fashion. Anything where ultimate image output is the end goal.

Shortcomings /Not best for: Fast action, travel, street

Value out of 10: 10

GFX50R *PERFECT DUAL SCORE & VALUE!*

Observations: The GFX50R is the one camera I have waited over a decade for! It's a tiny (for medium format it is!) rangefinder style medium format camera and despite its relative appearance in size, is actually quite lightweight. Even though I wear glasses, the EVF on the GFX50R is actually very large and a joy to use with no complaints. The GFX50R is the "street sweeper" and field camera, adept for travel and candid portraiture and field landscape photography. It does not have the tiltable capable EVF of the GFX50S, nor the DSLR ergonomics, nor the top display or as many function buttons but it is lacking for nothing as well. Strong recommendation for the GFX50R is to get the Fujifilm handstrap for it (made originally for the X-T1), because this makes handling so much better. I consider it a divine perfection to have (finally!!) a medium format inexpensive camera that will just deliver mind numbing incredible output that is portable for taking anywhere. The shutter shock dampening seems superior on the GFX50R and others report the same. This is a game changer and a first for digital photography. The GFX50R is my favorite digital camera of all time. Fully capable up to moderate action photography. **NOT for video use!**

BOTH the GFX50R and the GFX50S are the best made and best value medium format cameras that exist, and further still far cheaper in price than any other.

Overall score out of 10: 10

Best used for: Portraiture, Landscapes, Architecture, Macro, Product, Business, High Fashion, Street, Candid, Travel. Anything where ultimate image output is the end goal.

Shortcomings /Not best for: Fast action

Value out of 10: 10



FUJIFILM X-T4. Fujifilm's ultimate Do-it-all Jack of all trades & Expert on all fronts

X-T4 is the "Action Monster"

X-T4 *PERFECT DUAL SCORE & VALUE!*

Observations: The X-T4 has as its primary features, essentially twice the video custom functionality of its prior X-T3, a new 2X longer life shutter mechanism assembly. With 5 point spring suspension of the shutter mech. like that of the X-H1, but different. IBIS for stabilization which is both improved and great for video use and using older adapted lenses. A fully articulating display, nearly twice the battery life with a much larger newer battery. Superior buffer clearing and a higher FPS rate making the X-T4 an amazing camera for serious sports action and wildlife photographers, including it being ideal for photojournalism! Improved AF tracking and -6EV low light AF capabilities.

In short the X-T4 is the single do-it-all jack of all trades and master of all trades camera that Fujifilm has ever produced easily fulfilling the needs of nearly everyone regardless of what they shoot.

I would like to comment that the X-T4 has essentially the perfect ergonomics halfway between that of the X-T3 and of the X-H1. Necessarily so the X-T4 must be taller and thicker due to the larger battery, its compartment, and primarily due to the IBIS mechanism which, while thinner than that found inside the X-H1, makes the X-T4 necessarily thicker.

Overall score out of 10: 10

Best used for: Everything! Travel, portraiture, candid, action, sports. Really anything and everything. Video especially.

Shortcomings /Not best for: ...I cannot think of a single thing!

Value out of 10: 10



FUJIFILM X-PRO3. Fujifilm's high performance digital rangefinder. Classy, tough & titanium!

X-PRO3 is the "high class, high performance rangefinder"

X-PRO3 *PERFECT DUAL SCORE & VALUE!*

What if we could re-skin the X-T3 sensor, the image engine along with its speed and performance and change its form factor to that of a very classy digital rangefinder style camera with a top and bottom titanium plate and a high performance hybrid viewfinder? We then would have this, the X-Pro3! Let us not also forget the top sub-display of the X-H1? Where to put it? On the back of the LCD display. Very handy and always visible even when the camera is off. Form follows function, and while some have squeaked about (rather against) the inward facing LCD display, the truth is the X-Pro3 is exactly what it is designed to be, a mean fast, high performance digital rangefinder like none other, outstripping that of its former, the X-Pro2. Add in -6EV low light focusing and that wonderful low light BSI sensor and you have something magical in the X-Pro3, I love it!

The LCD on the X-Pro3 is the most smooth & buttery display I have ever laid my eyes upon. Even though the sensor and image engine are the same on the X-Pro3 as that of the X-T3, I love my X-Pro3 all the more so because of what it IS, which is not something you will not find on a spec sheet! I am very biased, I truly LOVE the X-Pro3! There is nothing that comes even close in the camera world to the X-Pro3 in the rangefinder arena.

Overall score out of 10: 10

Best used for: Street, travel, general, stealthy candid.

Shortcomings /Not best for: NOTHING!

Value out of 10: 10



FUJIFILM X100V. Fujifilm's ultimate stealthy street & travel fixed lens camera
X100V is the "Silent Monster" *PERFECT DUAL SCORE & VALUE!*

The X100V is (as form follows function of course!) a stealthy powerful street, general use, and travel camera. It can be engaged to run completely silent. It has a built in real ND filter, and likewise a leaf shutter which means it can use ANY STROBE OR SPEEDLIGHT if it be for Fujifilm or not for Hypersync (not HSS!, Hypersync is far superior to HSS) flash photography. Likewise too the "tiny" little flash on the X100V is much more powerful (in effect!) than other such tiny flashes because there is no need for pulsing light for higher shutter speeds above sync speed.

The rangefinder style digital design of the X100V and its hybrid finder is optimally useful for street, candid, perfect for low-key use and also perfect for general travel and simplex smaller videos while on the go. Now with a much sharper lens (much so!), larger viewfinder, and updated sensor, the X100V is the 'stealthy street beast' many photographers have long wished for. Now with articulating display and improved functionality the X100V is the best fixed lens camera out there. Powerful yet unassuming, silent yet captivating, stylish yet fully featured and extremely functional, the X100V is the fixed lens standard which others are measured against.

Overall score out of 10: 10

Best used for: Street, travel, general, stealthy candid.

Shortcomings /Not best for: Landscape, product, wildlife, high-end action

Value out of 10: 10



FUJIFILM X-PRO2 & X100F (the ‘rangefinders’)

X-PRO2

Observations: People often opine as to why the X-Pro2 is “so expensive” however much of the reason (in fact its not expensive at all) is the hybrid viewfinder which is so expensive to mfg. and delicate to assemble. I love my X-Pro2 however I’m not entirely in love with the tiny viewfinder since I wear glasses. In fact I love that it does not have a flipable LCD display which would make the camera thicker and lose the rangefinder style of the X-Pro2. The design and quality of mfg. is top notch. The X-Pro2 is a masterwork of mirrorless hybrid design. The X-Pro2 set a jaw dropping standard for mirrorless and camera design and is widely loved by so many, including myself. It’s the perfect little street and travel camera and capable of so much! Soon however the X-Pro3 will “drop” and we will have to see what that will be. **NOT for video use!**

Overall score out of 10: 9

Best used for: Travel, street, candid. Landscapes. General

Shortcomings /Not best for: Video, fast action, tiny EVF hybrid viewfinder.

Value out of 10: 8

X100F

Observations: The official Fujifilm ‘street sweeper’ and stealth camera for everyday packing. It has a hybrid viewfinder and is a digital rangefinder style camera with fixed lens with the every-beloved and epic-wonderful leaf shutter that has true hypersync capability with any speedlight made for any system. I love my X100F! You can think of the X100F as a smaller fixed lens X-Pro2 with a leaf shutter that has true stealth capability and can do utterly silent photography and delivers amazing output. It also has a true built in selectable ND filter! If you don’t know how important a leaf shutter is, and its advantages are for flash photography, you should investigate this. **NOT for video use!**

Overall score out of 10: 9

Best used for: Street, candid, stealth, travel. Hypersync flash photography with its leaf shutter (oh yeah!)

Shortcomings /Not best for: Sports, action, fixed wide angle lens. Landscapes. Tiny viewfinder. Misplaced Q button.

Value out of 10: 8



FUJIFILM X-T2 & X-H1 (The X-T2 series of sensor & processing)

X-T2

Observations: This is the camera that made everyone (including me) fall out of their chair, it is everything we asked for as the evolution of the X-T1 and so much more. Further more as time went on Fujifilm added so many firmware improvements to the X-T2 it still further evolved into a much better camera. I will never sell my X-T2 that I have remaining. The X-T2 can be had used rather cheap and is a perfect first pick camera for a new Fujifilm user. The X-T2 created a massive buzz around Fujifilm that made absolutely everyone stand up and take notice of Fujifilm. Perfect for honestly everything, travel, portraiture, street. The X-T2 set the mark for satisfaction for so many people, myself included.

Overall score out of 10: 9

Best used for: Everything! Travel, portraiture, candid, action, sports. Really anything and everything.

Shortcomings /Not best for: Video, however perfectly great for same. Vertical grip bug on reporting battery percentage in grip.

Value out of 10: 9

X-H1

Observations: The (as Fujifilm says) flagship mirrorless. The only thing people have griped about is that the X-H1 came out too close to the release of the X-T3, and thence declared it a “bit slow”. But all this is nonsense and the X-H1 is the IBIS imbued DSLR-ergonomics incredible camera from Fujifilm. The X-H1 has unique properties such as a leaf-spring shutter release that is divine, and a 5 point spring suspension on the shutter mechanism that makes for one really darn stealthy camera so perfect for wedding photography. The top LCD is amazing and mirrored from the GFX50S. Now that the price has dropped rather dramatically, currently at the writing of this book, the X-H1 is a topmost value to consider buying. The image sensor and processor are the same as that of the X-T2 however with DSLR ergonomics and much more such as IBIS and vastly improved video capabilities and recent firmware improvements for video and IBIS integration. I will never sell my X-H1!

Overall score out of 10: 9

Best used for: Everything! Travel, portraiture, candid, action, sports. Really anything and everything.

Shortcomings /Not best for: ...I cannot think of a single thing! It has been superseded for superfast action by the X-T3, but that makes it no less of a great capable camera.

Value out of 10: 10



FUJIFILM X-T3 & X-T30 (the new superfast pair, big brother & little brother)

X-T3 *PERFECT DUAL SCORE & VALUE!*

Observations: The single best professional DX mirrorless camera ever made to date, blasting fast, new firmware makes AF point touch selection really fast, also too eye-AF and face detection. Incredible video features, the X-T3 is honestly the X-T2 on steroids and then some. The only two complaints I had about the near-perfect X-T2 was the lack of a lockable diopter control and a lack of a form of “super-peaking” for extremely bright lighting and Fujifilm addressed both of those in the X-T3! The X-T3 really is the full evolution of the X-T2 with touch screen, 26MP BSI sensor with better low light gain for AF lock. Further more the X-T3 came in at a much lower price point than the X-T2 originally did which had and has people clamoring for the X-T3 to buy it.

Overall score out of 10: 10

Best used for: Everything! Travel, portraiture, candid, action, sports. Really anything and everything.

Shortcomings /Not best for: ...I cannot think of a single thing!

Value out of 10: 10

X-T30 *PERFECT DUAL SCORE & VALUE!*

Observations: Wow! The little brother of the X-T3, only lacking in all the “pro” nuances such as vertical grip, dual card slot & larger EVF. Essentially half the price at this writing, the X-T30 is the single best value and most capable compact interchangeable lens camera ever made. Autofocus is blasting fast, so too is eye autofocus, touch screen and touch AF point selection, and amazing video features with a tiny built in flash for candids at 15 feet or so and less. I dub the X-T30 ‘pocket dynamite’, such an amazing camera. Further still I put my manual focus Voigtlander glass on it (very compact) and have a camera with PERFECT focus peaking and a true dream camera. The X-T30 is the same sensor and image processing engine as the X-T3 is. The X-T30 might be a bit too small for some hands, and of course it has fewer function button abilities than the X-T3 but I have found it wanting for nothing. I honestly have been looking for something on the X-T30 to throw shade at, but I cannot find one, other than the tripod socket (dohh!) which is far too close to the battery door such that when I put a FASTENR on the bottom for a handstrap it keeps me from opening the door without removing the handstrap.

Overall score out of 10: 10

Best used for: Everything! Travel, portraiture, candid, action, sports. Really anything and everything.

Shortcomings /Not best for: ...I cannot think of a single thing!

Value out of 10: 10



FUJIFILM GF SERIES LENSES, SHORT NOTE WHAT THESE LENSES ARE BEST FOR

I have been asked by many people for a “short and sweet” notation of what each lens is best for. As is the case of course, almost all of these lenses can be used for almost anything, so do NOT read into this, for example, that you cant use “X” portrait lens, for example, in doing landscape etc. Obviously you can use ANY lens for ANYTHING you wish! But this list helps people make decisions quickly, and that is the aim of this list. This should be considered a “primary use & purchased for” list.

GFX ZOOM LENSES

FUJINON LENS GF 32-64mm F4 R LM WR

Best/ Ideal for: Street, General, Travel, and the #1 All-purpose GFX lens

FUJINON LENS GF 45-100mm F4 R LM OIS WR

Best/ Ideal for: Street, Travel, MACRO with MCEX-18G extension tube, Portraiture, Tele-landscape

FUJINON LENS GF 100-200mm F5.6 R LM OIS WR

Best/ Ideal for: Action, Travel, General, Moderate telephoto All-purpose

GFX PRIME LENSES

FUJINON LENS GF 250mm F4 R LM OIS WR

Best/ Ideal for: Sports, Action, Telephoto portraiture & landscape

FUJINON LENS GF 120mm F4 R LM OIS WR Macro

Best/ Ideal for: Macro, Product, Commercial

FUJINON LENS GF 110mm F2 R LM WR

Best/ Ideal for: Portraiture

FUJINON LENS GF 63mm F2.8 R WR

Best/ Ideal for: All purpose, Street

FUJINON LENS GF 50mm F3.5 R WR

Best/ Ideal for: Street, Urban, Travel

FUJINON LENS GF 45mm F2.8 R WR

Best/ Ideal for: Street, Portraiture, Single best do it all GFX lens

FUJINON LENS GF 23mm F4 R LM WR

Best/ Ideal for: Landscapes, Interiors, Architecture

FUJIFILM X SERIES LENSES, SHORT NOTE WHAT THESE LENSES ARE BEST FOR

I have been asked by many people for a “short and sweet” notation of what each lens is best for. As is the case of course, almost all of these lenses can be used for almost anything, so do NOT read into this, for example, that you cant use “X” portrait lens, for example, in doing landscape etc. Obviously you can use ANY lens for ANYTHING you wish! But this list helps people make decisions quickly, and that is the aim of this list. This should be considered a “primary use & purchased for” list.

X MOUNT ZOOM LENSES

FUJINON LENS XF 55-200mm F3.5-4.8 R LM OIS

Best/ Ideal for: Travel, Sports, Action, General telephoto

FUJINON LENS XF 100-400mm F4.5-5.6 R LM OIS WR

Best/ Ideal for: Wildlife, Sports, Action

FUJINON LENS XF 50-140mm F2.8 R LM OIS WR

Best/ Ideal for: Weddings, Portraiture, Sports

FUJINON LENS XF 18-135mm F3.5-5.6 R LM OIS WR

Best/ Ideal for: Travel, All-purpose do it all

FUJINON LENS XF 18-55mm F2.8-4 R LM OIS

Best/ Ideal for: Video, General all purpose

FUJINON LENS XF 16-80mm F4 R OIS WR

Best/ Ideal for: Portraiture, Travel, All purpose

FUJINON LENS XF 16-55mm F2.8 R LM WR

Best/ Ideal for: Weddings, Portraiture

FUJINON LENS XF 10-24mm F4 R OIS

Best/ Ideal for: Landscape, Interiors, Architecture

FUJINON LENS XF 8-16mm F2.8 R LM WR

Best/ Ideal for: Landscape, Interiors, Architecture, a superior “replacement” for the 10-24

X MOUNT PRIME LENSES

FUJINON LENS XF 200mm F2 R LM OIS WR

Best/ Ideal for: Sports, Action, Portraiture, Wildlife

FUJINON LENS XF 90mm F2 R LM WR

Best/ Ideal for: Portraiture, Sports, Action

FUJINON LENS XF 80mm F2.8 R LM OIS WR Macro

Best/ Ideal for: Macro, Portraiture

FUJINON LENS XF 60mm F2.4 R Macro

Best/ Ideal for: Macro, Portraiture

FUJINON LENS XF 56mm F1.2 R

Best/ Ideal for: Portraiture

FUJINON LENS XF 56mm F1.2 R APD

Best/ Ideal for: Portraiture with maximum puffy bokeh

FUJINON LENS XF 50mm F2 R WR

Best/ Ideal for: Portraiture, Travel, General

FUJINON LENS XF 35mm F2 R WR

Best/ Ideal for: Travel compact

FUJINON LENS XF 35mm F1.4 R

Best/ Ideal for: Portraiture, Great bokeh all-purpose

FUJINON LENS XF 27mm F2.8

Best/ Ideal for: Ultra-compact General

FUJINON LENS XF 23mm F2 R WR

Best/ Ideal for: Travel

FUJINON LENS XF 23mm F1.4

Best/ Ideal for: Portraiture, Travel wide angle

FUJINON LENS XF 18mm F2 R

Best/ Ideal for: General, selling to buy a different lens

FUJINON LENS XF 16mm F2.8 R WR

Best/ Ideal for: Travel, Interiors

FUJINON LENS XF 16mm F1.4 R WR

Best/ Ideal for: Portraiture, Landscape, Best ultra-wide X-mount prime lens

FUJINON LENS XF 14mm F2.8 R

Best/ Ideal for: Landscape, Architecture, Interiors

YOUR FUJIFILM CAMERA CLEANING & MAINTENANCE PRECAUTIONS



DIRTY LENS CAPS & BODY CAPS!



Your biggest mistake, and what I see THE MOST OF, and is a **surefire killer of your camera, is DIRTY LENS AND BODY CAPS!**

“WHAT THE HECK, NONSENSE!” I hear you say unbelieving. What is even worse, MOST PEOPLE NEVER EVER look at the inside of their caps before using them again and again, put them in their pocket, drop them, they collect all manner of filth!

I not long ago saw a GFX100 (\$\$\$\$\$) with a sensor SO FILTHY DIRTY, I nearly passed out (bit of drama there eh!). Likewise the rear of the lens was just as messy. I asked the owner to see his lens caps, SURE ENOUGH, a CESS PIT! This is not just ONE EXAMPLE, I see this ALL THE TIME! OVER AND OVER AGAIN I SEE THIS.

EVERY TIME YOU GO OUT AND PUT YOUR CAPS IN YOUR BAG, OR POCKETS, DROP THEM ETC. YOU MUST CLEAN THEM, AT THE VERY LEAST BLOW THEM OUT UNTIL YOU GET HOME AND CLEAN THEM THERE!

CHAIN OF EVENTS:

1. Lens and or body cap goes in your pocket when you are out and about. Or you drop them on the floor, dirt etc.
2. Dirty lens and or body cap goes back on the lens and camera
3. Dirt and filth migrate inside the camera and back of lens.
4. Dirty lens rear caps BY THEMSELVES migrate from cap to back of lens, THEN into your camera when mounted
5. The shutter blades moving at high speed against one another meet a dust or sand grain etc. and warp at their extreme speeds, they're VERY FRAGILE. This warping leads to premature shutter failure. \$600 repair, take the camera almost entirely apart.



THE OFFICIAL WAY TO CLEAN THE IBIS MOUNTED SENSOR INSIDE YOUR X-H1

In case you are wondering, this is the official word from Fujifilm themselves also. Since the sensor inside the X-H1 is mounted on a moving IBIS mount, there are special considerations for cleaning it. With the camera off the sensor assy. jiggles around freely and this is NOT an allowance for cleaning, so the camera must be on, but also other considerations listed here below. Even with IS OFF selected, with the camera on, IBIS is ALWAYS ON when the camera is on, even if it's set to "OFF" in the menus. **Follow these steps before cleaning:** 1. In menu settings turn OFF "shoot without lens". 2. Turn OFF "IS MODE" 3. Turn ON "ES" (electronic shutter) 4. Before cleaning make sure the camera is ON. 5. Now you can clean the sensor like you would any other sensor.



ONE TYPE OF MAINTENANCE, FIRMWARE!

Many Fujifilm users are aware of Fujifilm's perpetual improvements to their cameras via firmware updates, but be sure to keep in tune with what firmware your camera is running and check it against the latest firmware if any. Likely there are improvements you may not be aware of. To check your firmware, hold down the DISP/BACK button WHILE turning the camera on, keep it held down for 1 second then let go. Then your camera will tell you what firmware you have. You can also check your lens' firmware this way as well. To check the latest Fujifilm firmware visit:

https://www.fujifilm.com/support/digital_cameras/software/fw_table.html

THE REAL CAMERA & LENS KILLERS ARE NOT WHAT YOU THINK!

As someone that repairs and has repaired countless cameras, I can tell you with 100% certainty that nearly everyone is worried about the wrong thing regarding camera and lens killers. Most everyone thinks it is rain, cold, and solvents. This is entirely untrue. That however is not to say that a deep soaking in the rain of your camera for a good period of time wont kill it, but the visible water is not what does the camera or lens in, it's the extreme humidity. Humidity kills off cameras due to corrosion at a rate of at LEAST 1000X to 1 over that of visible water landing on the camera! The same goes true for laptops as well. The next biggest killer of cameras and lenses is DUST! I bet that statement shocks you but it shouldn't; the most fragile part of your camera after the main board which dies from humidity is dust causing shutter mech. blade failure. When the blades encounter dust, they warp at high speed leading to immanent shutter mechanism failure (see prior posting about the dangers of dirty lens rear caps and body caps). Likewise also deep cold does not kill off cameras, rather extreme heat does. Be wary of humidity, dust buddies, and extreme heat.



YOUR FUJIFILM IS A TOUGH PIECE OF PRECISION!

This is the skeletonized magnesium frame (took me a lot of work to do this!) of a X-T2, however the X-H1 is even tougher and thicker. Likewise in the same ilk are the X-T3 and other Fujifilm cameras. But like every digital camera there are many entry points for condensation, so take care of your camera.



FILTERS VS. PROTECTION

AR coatings (anti-reflective) go by many different names by different filter mfg. however they're all ultimately just AR coatings. For digital photography there are really only three types of filters to consider. 1. Circular polarizers 2. ND filters and 3. Protective filters ("UV / haze" etc.). Never ever consider buying just a clear filter. AR coated filters are only a few dollars more and are very important. Currently I only advocate B+W "UV / HAZE" MRC (meaning AR coated) for protection of the front element. Ultimately only about 40% of my lenses have protective filters on them. Key choice for filters are huge front elements which are fragile to damage. My \$6000 Fujifilm 200mm f2 for example has an AR coated protective filter. However studio lenses like my 105mm f2 Nikkor do not, they are "house cat" lenses for which I'm not concerned that much about protecting.



YOUR FUJIFILM CAMERA SENSOR IS ALWAYS EXPOSED, SO BE CAREFUL!

One 'downside' of mirrorless cameras is that the sensor is ALWAYS exposed unless your lens cap is on or you have a body cap on the camera. The CFA (color filter array) in most all cases are organic filters and rather sensitive, but so too the sensor. In cases of time exposures, namely sunrises and sunsets people setup their camera, and they do not realize that both before and after exposure, the camera is **STILL being exposed to highly concentrated light which can permanently damage the sensor**. If you plan on walking about with your camera for a long while without taking images, put the lens cap on. Be careful to NOT let the sensor get exposed for time exposures before or after the shot, since this is abusive to the sensor. People also forget that a lens by design is concentrating light, and is this literally like burning your sensor with a magnifying glass.



CHANGE LENSES WITH CAMERA FACING DOWN

When changing lenses anywhere, always do it with the camera facing down so both no debris falls in from above but also too that debris between lens mount and camera does not fall in.



DO NOT TRAVEL WITH YOUR FUJIFILM CAMERA WITH A LENS ATTACHED

Whether plane or train, car etc. you should not ever travel with your camera's lens attached. Not even a little lens like the one pictured, much less a larger longer lens. Countless people have learned the hard way about their lens being snapped off while attached to the camera. Just do not do it! Put the caps on the camera and lens and travel that way. Further still do not forget to get insurance on your gear (see tip in this book).



CONTACT LENS CASE FOR CLEANING FLUIDS

Buy some (\$1 each) contact lens cleaning cases to hold water on one side and 70% rubbing alcohol on the other. This is extremely small and compact for dipping your Q-tips in for cleaning lenses and or your camera.



SHORT TERM INVASIVE VS. LONG TERM PERVASIVE

When people idly talk about “weather sealing” (something that does not really exist in any camera), they’re actually worried about a non-issue and not at all worried about the only thing they really should concern themselves with, long term pervasive intrusion of weather fluctuations that lead to corrosion. A light sprinkle of rain, or a short burst of rain is not an issue. I’ve taken many countless cameras apart and I know very well what they are sealed for and against what. Some are far worse than others, in most all cases its foam rubber gaskets around the magnesium chassis frame and rubber O-rings around the bases of the dials in best cases.

All cameras however “breathe”, and so too do, as a perfect example, laptops, but in a different manner. Laptops suck in condensation two ways, they get hot and then their fans kick in sucking in moist air that corrodes the main board slowly like a growing fungus does, secondly they get hot and the temperature differential causes moisture in the air to fall out and condensate on the main board and kick start corrosion that way.

The last way is the exact same reason for 90% of all camera weather damage, not direct drops of water and such, but main board corrosion from long term corrosion that grows and grows, then boom, the camera fails. Digital cameras have main boards the same as laptops. The short term invasive weather (drops, demonstrable weather) is NOT a concern you should really be worried with, it’s the long term pervasive that destroys cameras the exact same way it destroys laptops, minus the cooling fan which sucks it in even quicker in the case of a laptop.

ART SUPPLY STORE FOR LARGE CLEANING BRUSH

If you check your local art store or painting supplies store, and snag a fine art brush like this, it will last a lifetime and is very useful. To clean, simply soak it in rubbing alcohol swishing it around to remove the dust, and let dry overnight.



HOW TO REMOVE YOUR EYECUP FOR CLEANING

Using two fingers or two thumbs, place on the bottom far left and right of the eyecup and press upwards, it will snap-disengage and then you can slide it all the way up and off. Replace it in reverse order, use a DAMP (not wet!!!) Q-tip to remove dust and or grime. Do NOT use a blower, which could possibly blow dust inside the EVF assy. around the “cracks” thereof.



USE THESE FOR CLEANING YOUR LENSES AND CAMERA

70% Isopropyl alcohol, (and 30%) distilled water, cotton (only cotton!) Q-tips/ swabs, an air blower. I use a little glass jar for refilling my distilled water into which I dunk my swabs for fast lens cleaning. 70% Isopropyl alcohol will not mar or damage either lens rubbers, or the camera body. **DO NOT USE 99% rubbing alcohol**, it can mar the rubber or finish on some lenses (very rare however, I've only seen it happen twice). 70% however has never been shown to do so, and I have used 70% now for literally 30+ years on countless things.



LITHIUM BATTERY BEST-CASE CARE FOR LONGER LIFE

When I did tech support for Apple it came upon me to learn an enormous amount about lithium batteries and what they like and do not like. I consulted the best battery experts and spent a lot of time condensing points about batteries and other topics, this also applies to any and all camera lithium batteries. When it comes to cameras, the issue of “rapid discharges” does not apply, however constant inflation and deep discharges DOES apply.



A lot of battery experts call the use of Lithium-Ion cells the "**80% Rule**", meaning use 80% of the full charge or so, then recharge them for longer overall life. The main quantified damage done in the use of Lithium Ion batteries are instances where the lithium battery is “**often drained very low**”, this is bad general use of your camera battery. If the massive amount of data that exists on lithium batteries were to be condensed into a simplex, helpful, and memorable bit of information it would be:

1. While realistically a bit impractical during normal everyday use, a lithium battery's longevity and its chemistry's health is most happy swinging back and forth between a 20% and 85% charge roughly.

2. Do not purposefully drain your battery very low (10% and less), and do not keep them charged often or always high (100%).

3. Lithium batteries do not like the following:

A: Deep discharges, as meaning roughly 10% or less. Avoid this in all instances if you can. This is hard on your battery.

B: Rapid discharges as referring to energy intensive gaming on battery on a frequent basis (in which case while gaming, if possible, do same on power rather than battery).

C: Constant inflation, as meaning always or most often on charge, and certainly not both in sleep mode and on charge always or often.

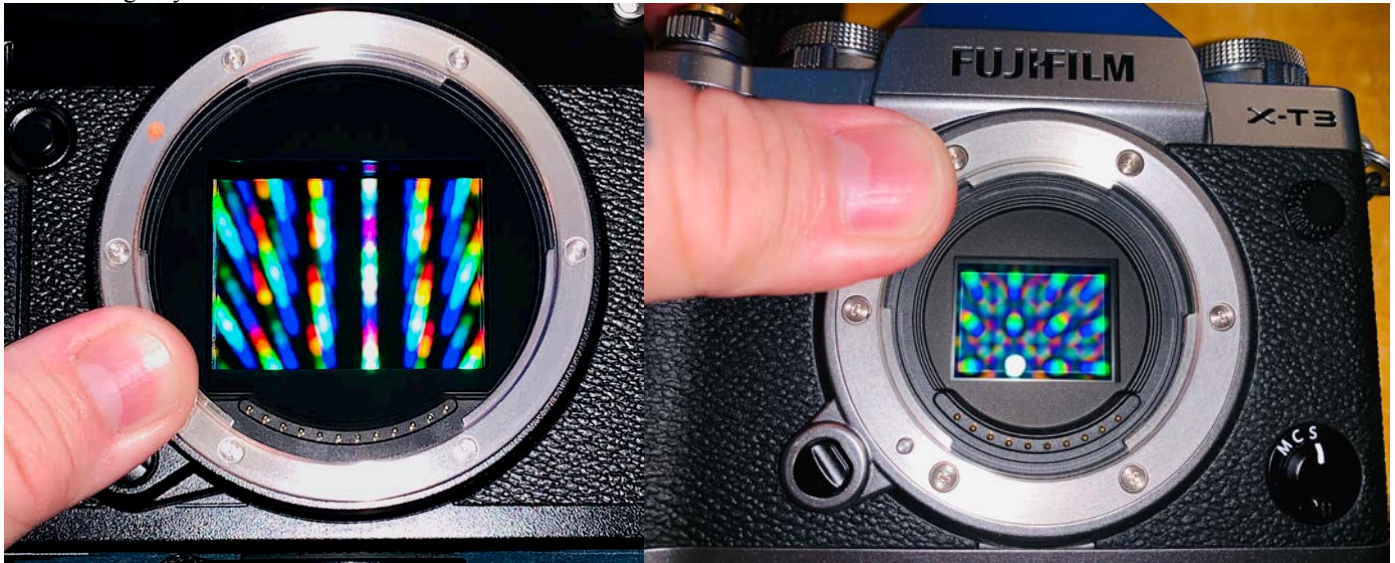
MAKEUP BRUSH CLEANERS

Buy either used or new (clean the used ones in rubbing alcohol and water and drip dry them) “lipstick brush” on Ebay. These used to be used ages ago for camera cleaning dust out of the cracks and crevices, and are also used for applying makeup. You can find neat old brass ones as well on Ebay. They weigh nothing, are cheap, and great portable cleaning tools for cameras and lenses!



RUN YOUR THUMB OR FINGER AROUND THE MOUNT

Depending on how much or often you shoot, you should periodically remove the lens and with clean hands and fingers, run the pad of your finger, with mount facing DOWN, around the metal lens mount ring to remove (you'll see it on your fingers!) dirt and grime, and trust me, if you don't see it, I can assure you there is a lot of it there! This nearly invisible grime DOES and WILL migrate into the camera, onto the shutter blades and or sensor cover glass which you'll have to remove later. This should ALSO be done to the rear mount ring of ALL your lenses. Likewise the very light skin oils on both rings made for easier (try it and see) mounting and dismounting of your lenses.



MY PORTABLE CLEANING KIT FOR MY CAMERA BAG OR CASE

This is my recommended camera & lens cleaning kit (I have several made up) I keep in my camera bag. It consists of a contact lens case with distilled water on one side and 70% rubbing alcohol on the other side. A lipstick-tube screw-out brush for removing dust and debris, a pack wrapped in tinfoil of a dozen Q-tips for lens cleaning, also too a tiny lens cleaning cloth I use to remove smudges etc. from the LCD display.



RUBBER BAND AT THE BASE OF THE LENS FOR BAD WEATHER

However I suggest a rubber band a bit wider than the one pictured below, in the case of non-gasket affixed lenses and even those with gaskets, this is a very nice trick that keeps water from seeping in between the crack between the lens and camera mount. Also too it keeps out sand and other debris under bad/dirty shooting conditions. Even WITH a rubber gasket on a lens, water and sand will wedge in the crack and when you go to change lens, the debris make its way inwards (in the case of sand); ergo a wide rubber band keeps everything out.



ZIPLOCK BAG YOUR CAMERA WHEN...

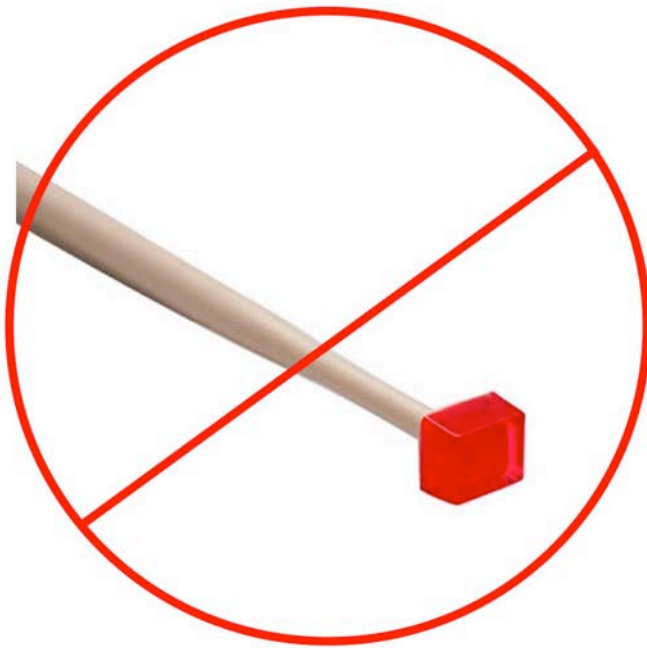
When taking your camera inside out, or vice versa, to prevent condensation forming on the main board and eventual corrosion which causes camera failure, ZIPLOCK your camera with a giant freezer bag and allow the camera to acclimate to the temperature. This also doubles in packing your camera in rainy or humid conditions outdoors, your camera bag provides NO such protection on this front for your camera.

This is also the same trick that works for new fish you buy for your aquarium. If you dump the fish straight from bag into your aquarium, the fish die of shock. You put the bag on top of the water and let the fish acclimate to the new temperature then you dump them into the tank.



NEVER USE THESE DESTRUCTIVE DEVICES TO CLEAN YOUR CAMERA / SENSOR!

On the left, the sensor gel stick, it comes in blue or red or green, its just a sticky silicone gummy on the end of a stick, there have been COUNTLESS cameras ruined by these evil devices, ... and worse still in most cases it not only does not clean the sensor cover glass but makes it worse with sticky track marks that are nearly impossible to remove. This invention (rather camera torture device) is as ignorant as thinking using sticky tape is a good way to clean your windshield instead of a cloth and cleaning fluid! **NEVER EVER EVER EVER EVER USE THESE HORRIBLE DEVICES!** On the right is the typical canned air “cleaning” device. NEVER for a second consider using this stuff! Why is it so bad? 1. It takes dust and grime and instead of removing it, just blows it into the camera where you cant remove it. 2. It pressure jet deforms and warps shutter blades which are very fragile. Never use canned air on a digital camera! Further still on sealed cameras like the X100F and the Hybrid viewfinder of same, and the Xpro2 it will blow dust INTO the EVF window and irritate the hell out of you and will create upsetting dust INSIDE the camera that was NOT there before!



NEVER USE THESE PRODUCTS TO CLEAN YOUR CAMERA LENSES!

First thing someone says when I tell them this is “but but, I’ve been using these and.....”. In fact moistened paper wipes are rough on the AR coatings of lenses, and leave a residue. The sprays are even worse since they always leave liquid around the edge of the element which creeps around the corner and leaves nasty spots YOU CANT REACH! You should never ever use either one of these at any time for any reason. Only use cotton swabs and or a clean cotton cloth for cleaning lenses. Along with Isopropyl (70%) alcohol and distilled water.



THE BEST WAY TO CLEAN YOUR CAMERA LENSES

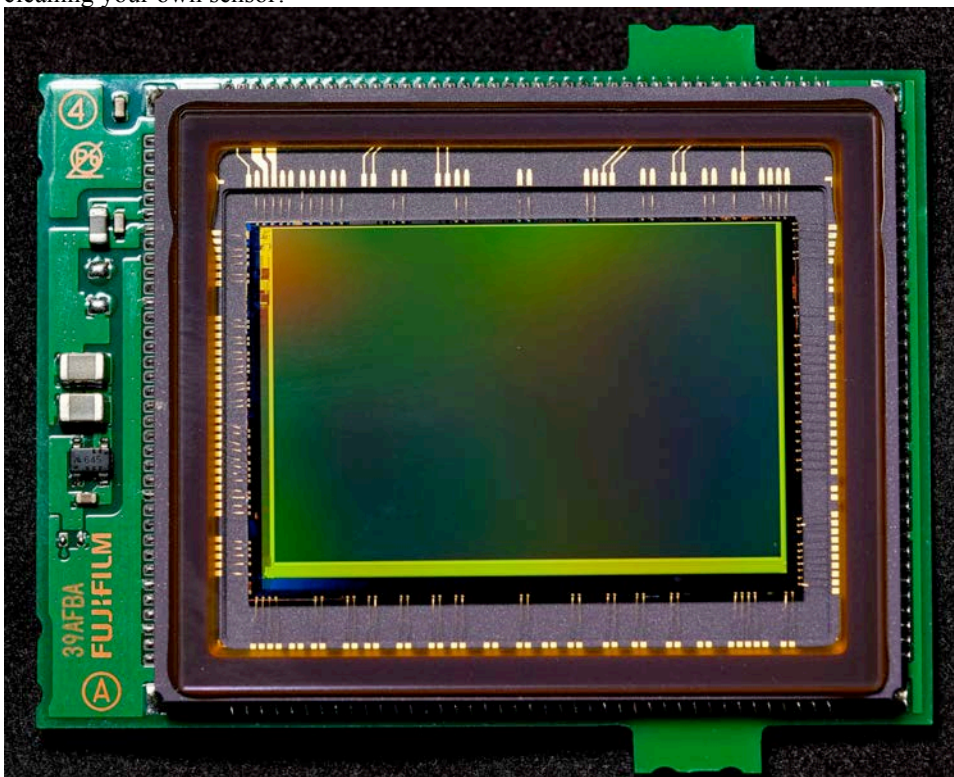
<https://www.youtube.com/watch?v=dBTb110jLIw>

I have perfected lens cleaning over two decades and the trick is to clean them the same way they're polished in the finishing states of mfg. See video above. Use cotton (only cotton!) Q-tips/ swabs and wet the tips in distilled water and then using a clean cotton press and remove ALL excess water so that the swabs are wet but not dripping. Use a pair or 3 swabs for larger elements and go in circular motions around and around and then inside to the center and then around and to the outside all the while in circular motions. Flip the Q-tips over to the dry side and do the same again drying off the lens. This is the most fast and effective way of cleaning your lenses.



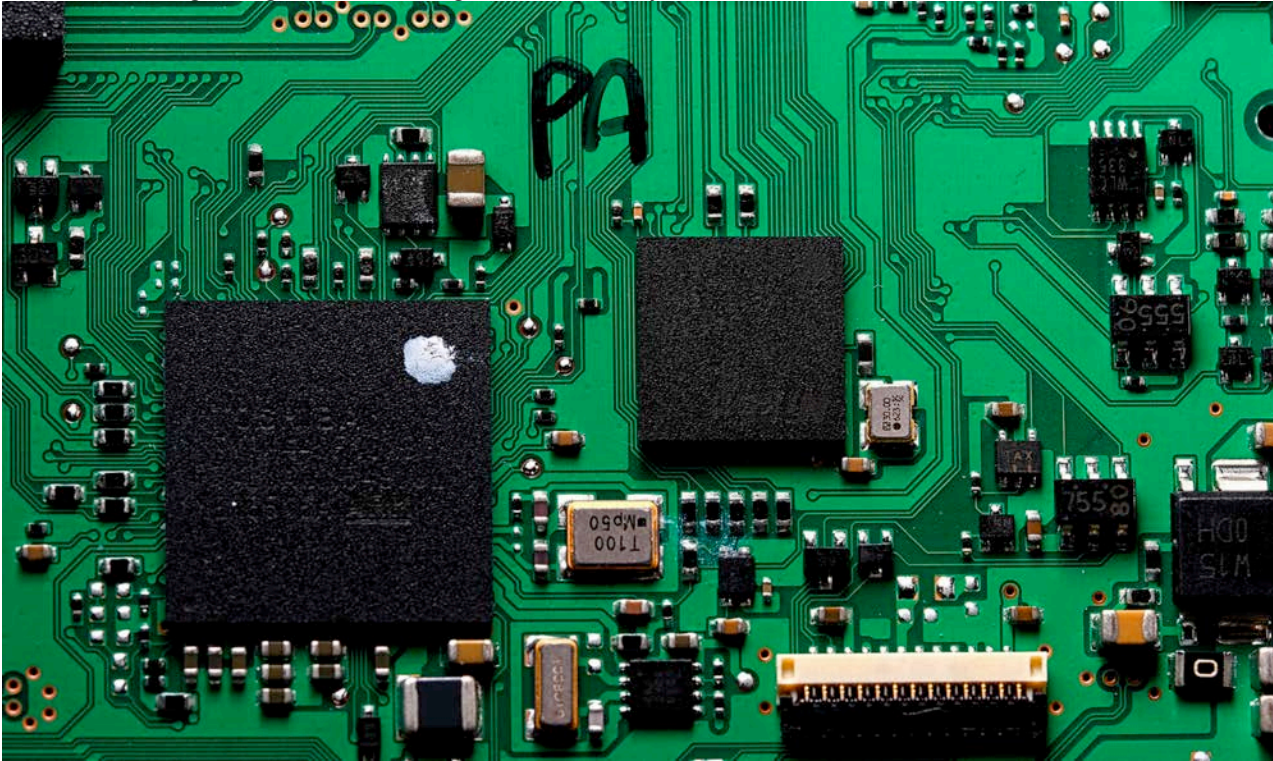
DON'T BE AFRAID TO CLEAN YOUR SENSOR BECAUSE....

Everyone loves to THINK that their sensor is the “most fragile” component in their camera, and everyone is 100% WRONG. In fact, the image of the sensor below (from a X-T2) is covered and hermetically sealed with a very tough piece of glass, but wait! On top of this (not shown) is a stacked layer of glass also containing the IR hot (pass) filter...and further more on top of all of this is the cover glass, which is the only thing anyone is ever actually cleaning, NOT the sensor. While of course it is important not to scratch the cover glass, nobody anywhere is getting even CLOSE to the actual sensor. In fact other than the magnesium body of the camera, the sensor itself is the LEAST FRAGILE PART IN ANY DIGITAL CAMERA! Think about this fact if you're still worried about cleaning your own sensor!



THE MOST FRAGILE PART INSIDE YOUR DIGITAL CAMERA IS....

Flat out without debate the most fragile part inside any digital camera is the main board, not the sensor which is hermetically sealed and covered in many layers of glass. The main board (i.e. the “motherboard”) in your digital camera is susceptible not really to rain, but to corrosion “growing” on it and killing it due to humidity intrusion.



SAVE A LOT OF MONEY ON SENSOR CLEANING PADDLES!

Sensor cleaning paddles are \$5 or up to \$8 a pop and with a dirty sensor you WILL use up to 3 of them easily. If you buy a pack of very cheap PEC PADS (Amazon, etc.) you can, after using your sensor cleaning paddle, remove the fabric on it, leaving the plastic paddle, and then WITHOUT TOUCHING the contact surface of the PEC PAD cloth, wrap, it around your sensor paddle and tape it in place or rubber-band it at the stick base of the paddle, and then you have a new sensor paddle ready for the next cleaning, but make sure you do NOT touch the contact end of the fabric. Put the paddle back into its little plastic sleeve and reseal it with tape so it stays clean. It is the case that the sensor cleaning companies would NOT ever tell you this, but that is because they want your fast return business in buying more sensor cleaning paddles.



OH THE SPOTS! WHERE ARE THOSE SPOTS ON MY SENSOR!?

Yes, I know this image is upside down, see the spots at the “top” of the image? Anytime you see spots etc. on your image (viewed upright and correctly) at the TOP ... the actual spots and grime are on the **BOTTOM OF YOUR SENSOR!**

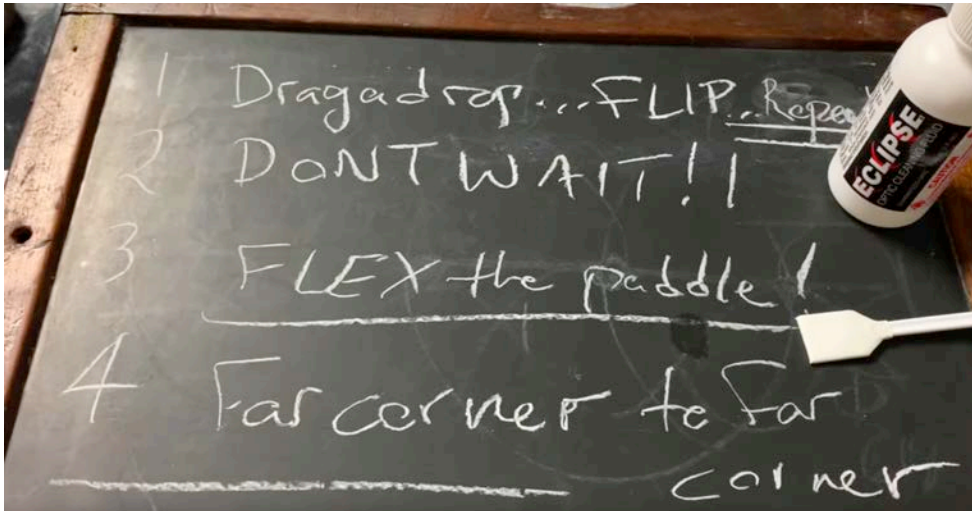


FOUR RULES OF PERFECT SENSOR CLEANING!

<https://www.youtube.com/watch?v=X2hLSx2aeFg>

There are really only 4 steps to PERFECT sensor cleaning! I love to simplify things, and if you follow these 4, you cannot miss on cleaning your camera's sensor. See the video above for fuller details if needed.

1. Drag a drop of sensor cleaning fluid on both side edges, at the end of the paddle, not the middle, not near the edge, but **AT THE EDGE**.
2. **DO NOT WAIT** after performing step one, immediately (within 5 seconds or so) start the cleaning, otherwise the liquid will start to dry, and it does this quickly, and you will leave streaks on the sensor!
3. Everyone is afraid to touch or "stab" the sensor, but you're NEVER doing that, you're only cleaning the sensor's cover glass, you must **FLEX THE PADDLE WITH ENOUGH PRESSURE ON BOTH SWIPES** to impart **FULL CONTACT** with the cover glass! If the paddle is not bowing/bending, **YOU'RE DOING IT WRONG!**
4. When cleaning, start from the **FAR INSIDE EDGE** of the sensor by placing the sensor inside the far edge before beginning, NOT AT a straight 90 degrees to the sensor but inwards to **BOTH FAR EDGES** as you move from one side to the other, then reverse movement, that is to the other side edge of the cleaning paddle as you make your way back to the beginning point.

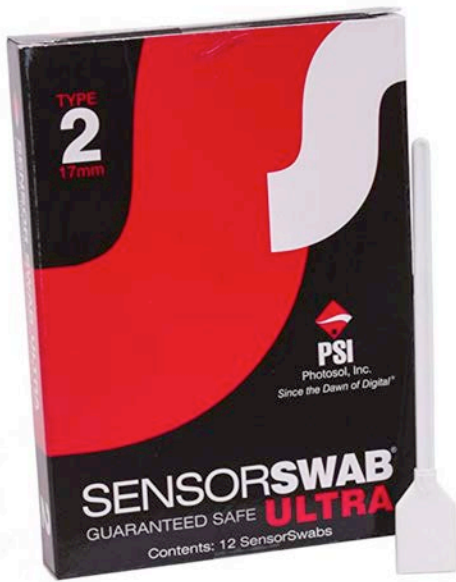


USE PHOTOSOL SENSOR CLEANING PADDLES TO CLEAN YOUR SENSOR

<https://photosol.com/products/>

<https://photosol.com/products/sensor-swab-ultra/>

The very best sensor cleaning paddles are made by PHOTOSOL, also you need to buy their ECLIPSE cleaning solution, I recommend you only buy the 2 oz. bottle since that will last a near eternity with no call to ever buy that aspect of the cleaning kit ever again. Two drops of solution on a paddle is all that is required. PLEASE NOTE that sensor paddles come in 3 different sizes for different sized sensors, check their website for your camera and the sensor paddle size needed for your camera. Please see my videos on sensor cleaning how to.



SAVE USED BUT MOSTLY CLEAN SENSOR CLEANING PADDLES

Why on earth save an already used sensor cleaning paddle? In 99.9% of instances, a used sensor cleaning paddle (\$5 a pop) is 99% clean, and in severe cases, after a field trip, or nasty outing and your sensor unfortunately get extra dirty, then instead of wasting 3 paddles to get it clean, at \$5 a pop, use the almost entirely clean but used paddle to remove the nastiness from your sensor cover glass, then of course, use a clean one to finish the job.

After this of course, you should toss the paddle out. If you don't want to do this, and trust me, there is no risk of camera damage in doing so, then remove the fabric on the paddle, and place a new clean PEC PAD over the paddle and either tape it in place or rubber band it, and use that to clean the really dirty sensor off then use a clean new sensor cleaning paddle. It IS the case that the sensor cleaning companies would NOT ever tell you this, but that is because they want your fast return business in buying more sensor cleaning paddles.



SENSOR CLEANING TRAVEL MINI-CASE

Photosol sells these and they contain a tiny bottle of sensor cleaning fluid, and a number of paddles, you can of course refill it and I take this everywhere with me when I travel. It is tiny and weighs next to nothing.



PRIMARY FUJIFILM MENU TIPS & CAMERA TRICKS

X-T3 FACE/EYE DETECT & FACE SELECT

With new X-T3 firmware users requests have been answered in that now rather than an assigned function button for Face Detection being engaged, the very same function assignment now merely turns on or off this feature. Now, after 3.00 X-T3 firmware I have assigned a function button to FACE SELECT. Now one button toggles on face detection with EYE AUTO as a subset of it being on, see options in your menu as shown on image at right.



IS MODE. WHICH TO USE AND WHY. IMPORTANTLY WHEN NOT TO USE IT AT ALL

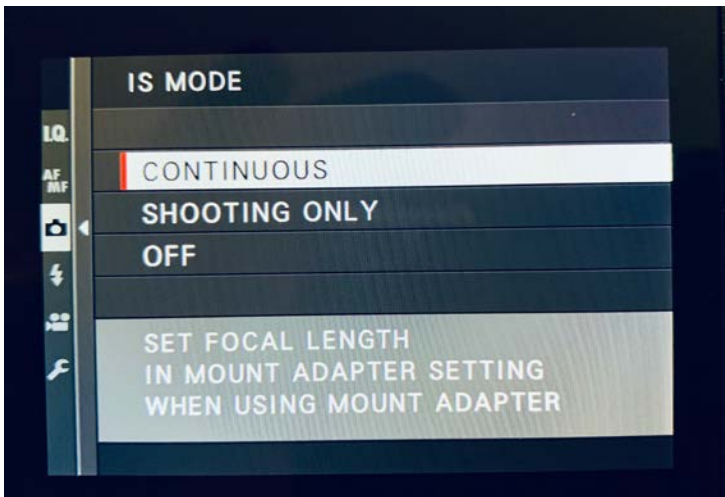
This tip is actually very important, but first we need to establish some facts most people are utterly unaware of. First off, if its called OIS (optical image stabilization), or VR (vibration reduction) by another camera / lens mfg. does not matter whatsoever, the fact is that this mechanism moves small internal lens elements in the optical path to counter camera shake which is induced from hand holding. How is this bad? Because **shake is shake is shake & vibration reduction (OIS) INVOLVES creating vibration (to eliminate out shooter vibration!)**, and at faster shutter speeds (depending on the lens, it varies with no fixed shutter speed) roughly 1/60th or 1/125th and higher **the same mechanism (VR / OIS in the case of Fujifilm) that REMOVES SHAKE will also CAUSE SHAKE at higher shutter speeds.**

The two images below, left image from the X-H1, and right image from the X-T3 are shown. In the case of the X-H1 the image stabilization lens OIS works in conjunction with the IBIS mechanism when an OIS lens is present. Even with IS OFF selected, with the camera on, **IBIS is ALWAYS ON when the camera is on, even if it's set to "OFF" in the menus.** There is no physical LOCK on the IBIS mounted sensor in any Fujifilm camera. Most people leave the lens OIS on all the time and likewise leave the camera OIS mode (1 or 2) which is default CONTINUOUS (MODE 1), on all the time and this is not good!

I would get constant emails from people with the new 100-400 lens and wonder why all their images (or most) are blurry. I'd ask if it was bright sunlight outside. The answer was almost always yes. Additionally of course they had the lens OIS set to ON, and had never taken the OIS MODE off of the default 1 (always active). This and the typical 1/500th shutter speeds or higher meant that the OIS was causing shake and blurry images. Fujifilm alas is actually at fault for this somewhat greatly for not really making ANY MENTION AT ALL in their user manual about how important this fact is! Also to state the seeming obvious you should should turn off OIS for tripod use.

OIS MODE 1 ("continuous"): always on, default but take this OFF by switching the lens OIS off for higher shutter speeds. Use MODE 1 (continuous) for slow shutter speeds (but not Time or Bulb!) up to about 1/60th.

OIS MODE 2 ("shooting only"): Means that OIS only engages at that last tiny fraction of a split second before the shot is taking. Use this mode roughly up to 1/250th. But depending on the lens used this not a "set in stone" shutter speed to turn off the OIS. In the instance of very long telephoto lenses, you can leave the OIS MODE 1 on to steady your live view for image composition.



BRACKETING EXPOSURE

Below is the Frame/Step menu for bracketing, but also you need to choose either FRAME or CONTINUOUS for the shot sequence. The most logical choice is continuous under most all circumstances. For SEQUENCE SETTING its best to choose 0 then + and - , meaning the chosen exposure is taking first, then the exposure bracketing at "X" (you pick the step setting increment) at a longer exposure, then for a shorter exposure to finish. To quickly set these parameter for BRAKETING MODE (set bracketing on your mode dial under the ISO knob, you should assign the DRIVE (DRV) to either a function button or to your Q menu. For the step setting 1/3 of a stop is far too insignificant for a 3 shot bracketing, I choose either 2/3 or a full stop. For 5 shot bracketing, I choose 2/3 stop.



CHANGE LCD DISPLAY INFO

While looking at your LCD display you can toggle thru 4 different screens. The info display is shown below, but also standard (shooting “mode” display), information all off (i.e. a “clean” screen for shooting), and favorites.



EVF & LCD DISPLAY BRIGHTNESS

I personally do NOT prefer the default AUTO setting for EVF brightness and LCD brightness since it shifts under “harsh” lighting conditions like bright outdoors and indoors. Try this yourself and try turning off AUTO on both and setting them to either 0 or 1. I think you will be pleased and prefer this.



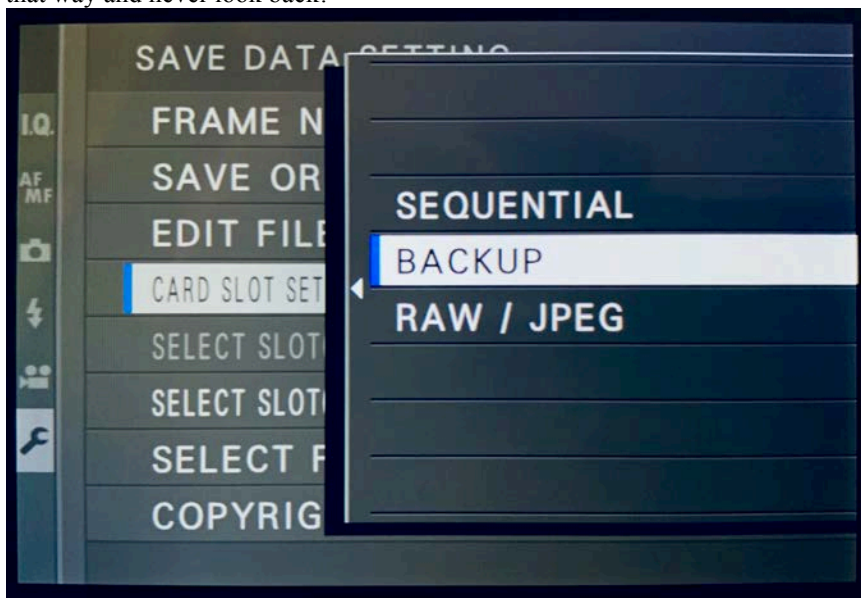
FOCUS OR RELEASE PRIORITY?

This is absolutely a woefully neglected but important part of your Fujifilm camera menu! Default is release on both AF-S and AF-C TYPE autofocus, which means that regardless if the selected MODE (single, zone etc.) is in focus, if you smash the shutter release it will take the shot. This has advantages for action, and if enough DOF is present, great! If not, then of course,...you have missed the shot. Take the time to think if your photo composition warrants this setting, of do you choose focus priority? Which means the shutter will not release fully and the shot will not be taken unless AF lock has been acquired.



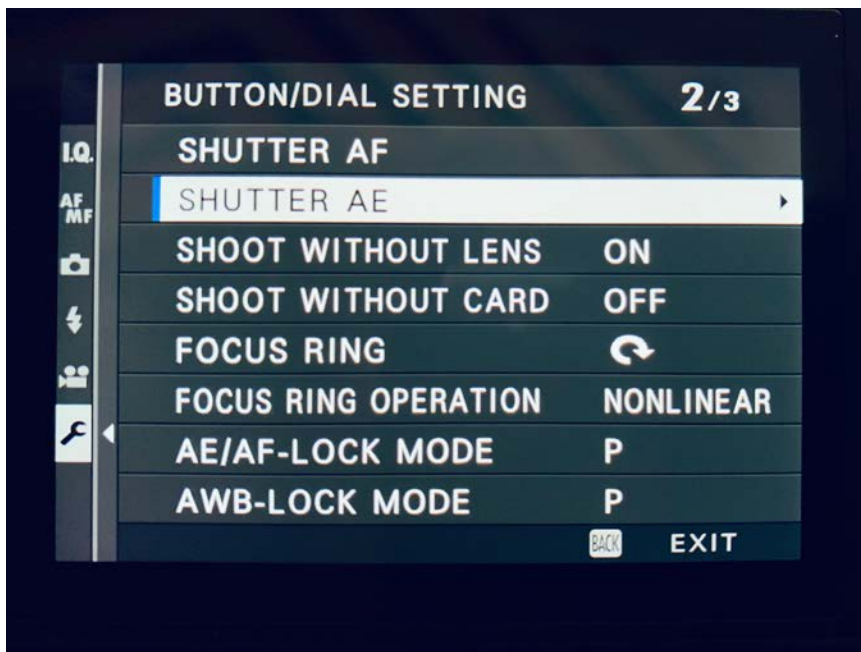
SD CARD SLOT SETTINGS FOR DATA SAVE

Sequential is the default but should not be. One of the primary purposes of a professional camera is having redundancy (and redundancy is god!). Sequential fills up the first card slot before going over to card slot 2. Backup means all data is mirror copied to the second card slot at the same time as slot one. True redundancy! RAW/JPEG writes RAW files to slot one and Jpeg to slot 2. Seriously any professional is doing one thing and one thing only, shooting in **BACKUP MODE** on their save data settings. Keep it that way and never look back!



SHUTTER AE SET TO OFF FOR CONTINUOUS SHOOTING

The factory default for SHUTTER AE is ON, but should be switched OFF in most all situations for continuous autofocus when shooting bursts of multiple images in a row. In OFF position for continuous shooting, the exposure value changes from shot to shot as the lighting changes, even in CH, CL shooting. You may not wish this to be the case depending on the shooting you are doing, but most continuous shooting has changing lighting values and constantly changing (as performed by the camera) the exposure value for each shot is very helpful. In the ON position, the exposure does NOT change from shot 1 to 5, or from 1 to 10 etc. etc. as you are shooting in rapid burst mode. The exposure is locked in place and held from the very first shot in ON position.



SPLIT SCREEN IN MANUAL FOCUS MODE

In manual focus, keep hitting your DISP/BACK button until you reach your split screen option which is extremely helpful. Depending on how you choose (see below tip on split screen options) you will see the entire frame of your composition in one window and a zoomed view to fine focus using your peaking in the other window. Make sure to take advantage of this for adapted lenses and general manual focus.



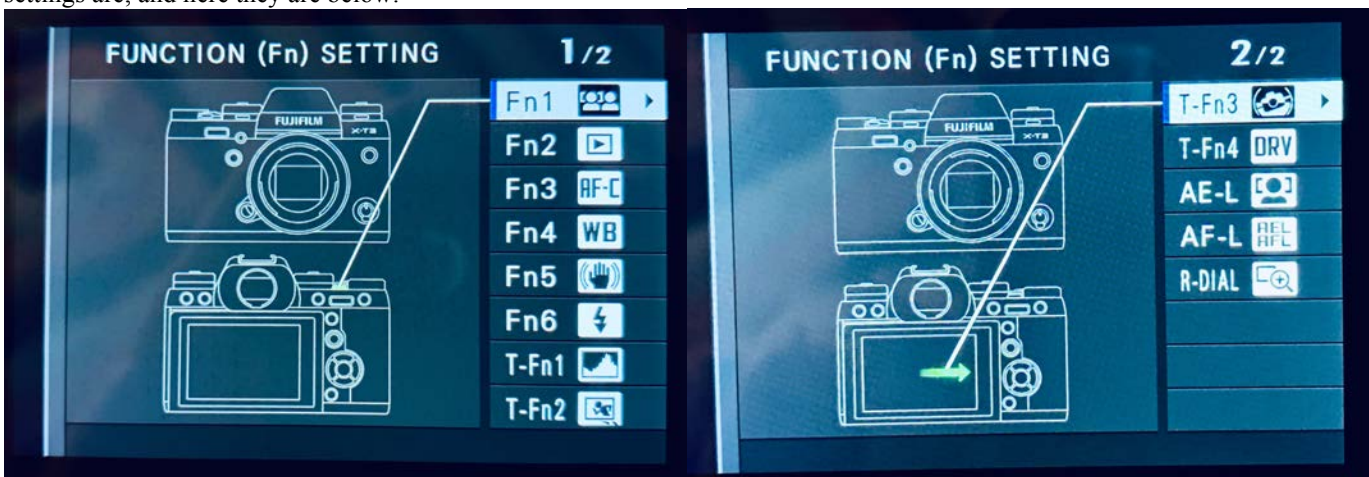
SPLIT SCREEN OPTIONS

In your display settings options you can switch the full frame / focus frame from left to right as you choose for manual focus assist. I myself prefer the zoomed in (focus) frame on the left which is larger and the full frame composition on the right in the smaller window.



ABSOLUTELY THE MOST IMPORTANT THING TO SETUP ON YOUR FUJIFILM CAMERA!

Most definitely the most important thing to setup (and this is subjective how you choose) on your Fujifilm camera is the function button and swipe screen (if you have that option) settings for fast access to your very most often used settings and options. My absolute favorite is shown below. To enter this (quickly) you hold down the DISP/BACK button for a few seconds and then you enter the menu to change the functionality as you pick for your camera. Countless people ask me what my function button and touch-swipe settings are, and here they are below.



MY X-T30 MENU

Absolutely love my Fujifilm X-T30, and it gets a perfect 10/10 score from me, and since so many people asked, even though function button and touch-swipe settings are subjective, here is mine to see.



THE SECOND MOST IMPORTANT THING TO SETUP ON YOUR FUJIFILM CAMERA!

Hold down the Q button for a few seconds to enter into your Q menu selectability/change to make your second most important set of menu selections for fast operational changes. Your absolute most important and high traffic menu use functions should be set (see above) to your function buttons, whereas your often used but not as frequent settings should go to your Q menu. In doing this, you will almost never have to hit the menu button and scroll around while out shooting to adapt the camera to your specific needs.

To change your Q menu hold down the Q menu for several seconds.

To enter Q menu to pick an option, just quickly touch your Q menu button.



PART 1: FAST ISO AND EXPOSURE COMPENSATION ADJUSTMENT

If you look at the top of this X-T3, you'll see that my ISO dial is set to A (in red) and my shutter is also set to A (Auto, since I'm shooting aperture priority most of the time), and that my exposure compensation wheel is set to C, so that I never have to turn that wheel ever again (or as you prefer) to adjust my exposure compensation, rather (See part 2 below) by clicking my front command dial, I enter exposure compensation setting letting me turn the front command dial to +5 or -5 EV stops of exposure compensation, and one click more changes the adjustment from exposure comp. to ISO change, and then again I can turn the front command dial to change my ISO to however I wish. For me I have found this is the most fast camera adjustment and I no longer (not that I'm against it) have to adjust ever again the ISO dial, nor the exposure comp. dial, and the ISO dial.



PART 2: FAST ISO AND EXPOSURE COMPENSATION ADJUSTMENT

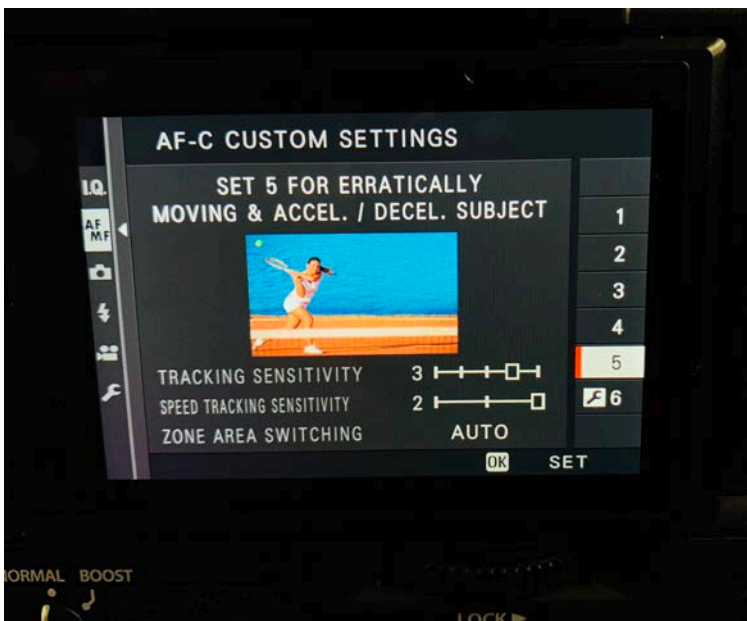
In addition to the dial settings in the image above, you will need to (see images below) adjust the ISO DIAL SETTING from auto to command (meaning the command wheel lets you set the ISO instead of the dial), likewise in the COMMAND DIAL SETTING adjustment set the functionality as indicated below.



AF-C CUSTOM SETTINGS TO TELL YOUR CAMERA WHAT TO LOOK OUT FOR

The 6 sections are: **1. Multi-purpose** **2. Ignore obstacles & track the subject** **3. For accelerating and decelerating subjects.** **4. For suddenly appearing subjects.** **5. For erratically moving objects.** **6. Custom.**

The AI inside your camera is ignorant (as are ALL cameras) for what it needs to look for in autofocus continuous shooting, and the more specific you can tell your camera WHAT to look for the better, faster, and more accurate the autofocus can and will be.



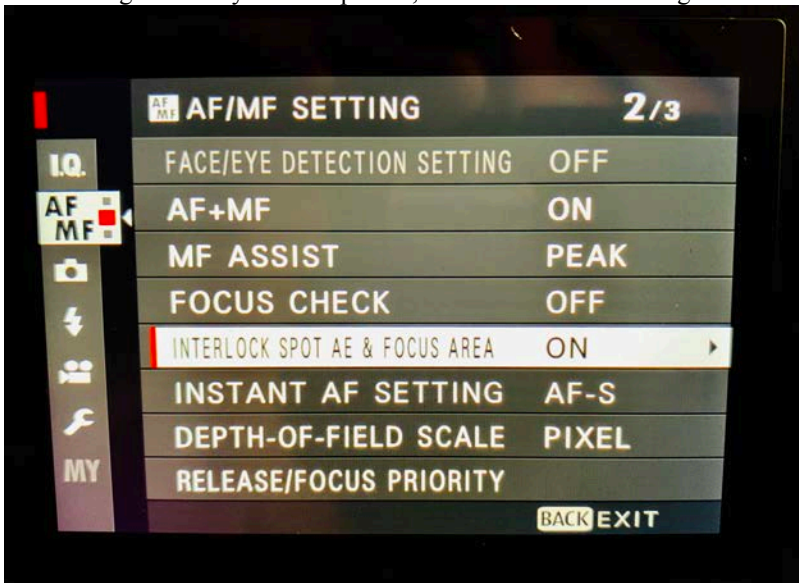
FOCUS PEAKING COLORS ARE IMPORTANT

Almost everyone ignores this features and its great importance. Depending on the scene, subject and background color, brightness, choosing your focus peaking color is incredibly important, you wouldn't for example choose white peaking to focus on a mostly white subject, I choose blue or red, and you would not choose blue or red on a dark subject in low light, you should choose white. Low and high are just intensities of peaking color, and frankly I always use HIGH.



SPOT EXPOSURE WITH SINGLE POINT

Extremely useful is when using spot metering exposure (what Fujifilm calls photometry) in conjunction with SINGLE POINT AF point selection, the camera will calculate the metering for only the spot covered by your AF point selection. This is very useful for determining correct eye/face exposure, or as the basis for setting the latitude of your exposure, especially in backlit compositions.

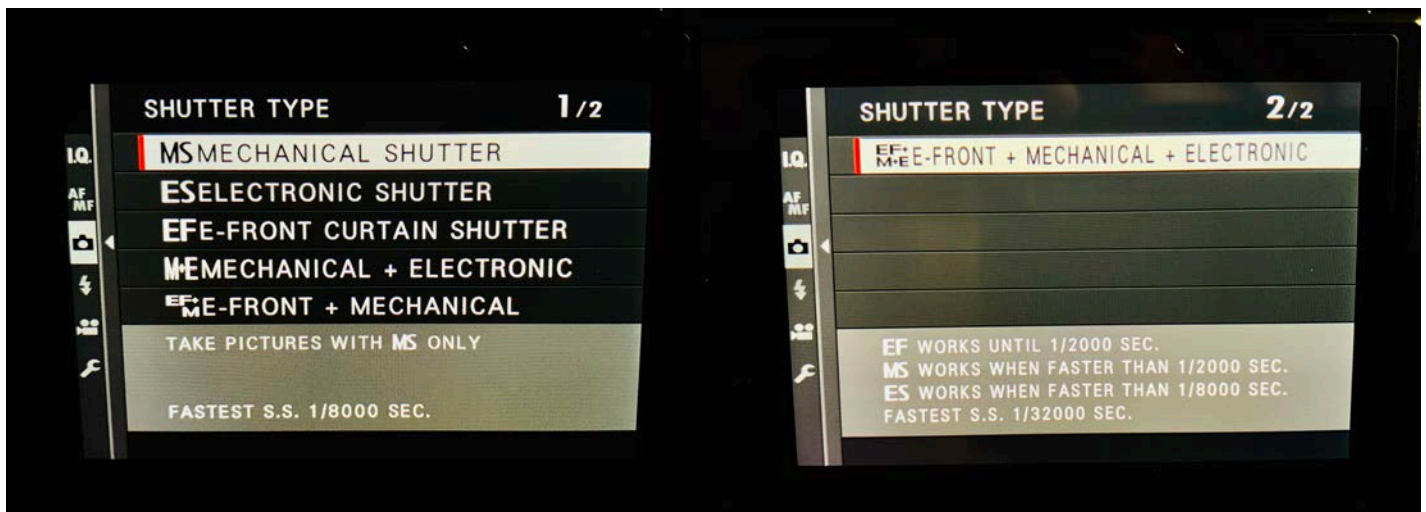


LEARN YOUR SHUTTER TYPES

You need to learn both the advantages and disadvantages of the different shutter types. For example, you cannot do flash photography with electronic shutter (ES). Further still bokeh and flash artifacts are frequent with EFE (electronic front curtain). Your Fujifilm (same as a DSLR) has two curtains, same as a pair of curtains on a window, the first curtain falls and then the second, depending on the shutter speed the 2nd follows very closely.

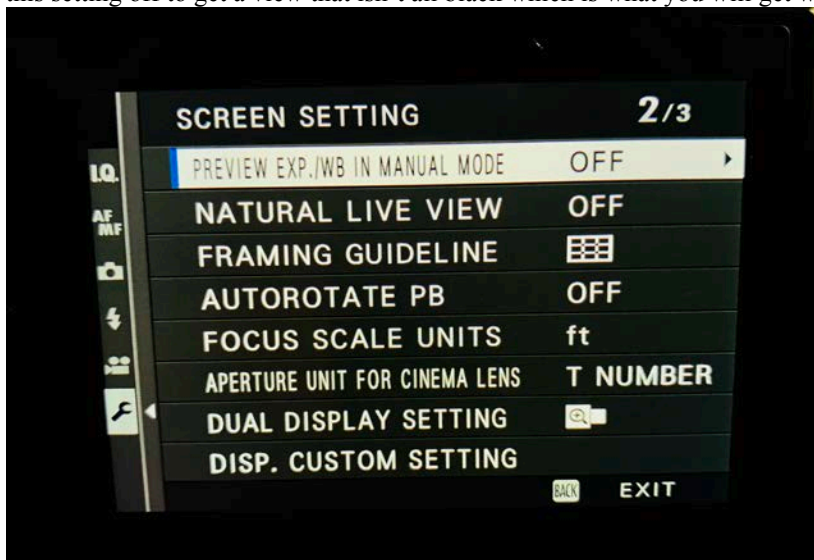
Suffice to say each curtain carries with it a shock from movement causing shake, and at slower shutter speeds, choosing electronic first curtain means that ONLY the 2nd curtain falls and the first is just a digital scan and this greatly reduces shock and shake for slower shutter speeds. Electronic shutter is a digital only scan and has no shock, however flash photography is not possible with it, however under bright light and aperture wide, you can increase the shutter speed (sensor scan really) to 1/32,000, whereas in MS 1/8000 might be insufficient to prevent overexposure.

Make sure you fully learn the advantages and disadvantages of each type and when which is best for what use. In MOST cases always using MS is a good idea, however EFE and ES have unique advantages for shock and fast shutter speeds. If you see the image below on the right (what I use most often except for flash photography) the EF+M+E, the camera switches to the most optimum shutter type based on the speed. Electronic front curtain should be used for NON-FLASH photography at all slow shutter speeds up to 1/2000th. You can use it for flash, as I said, but artifacts are common to appear.



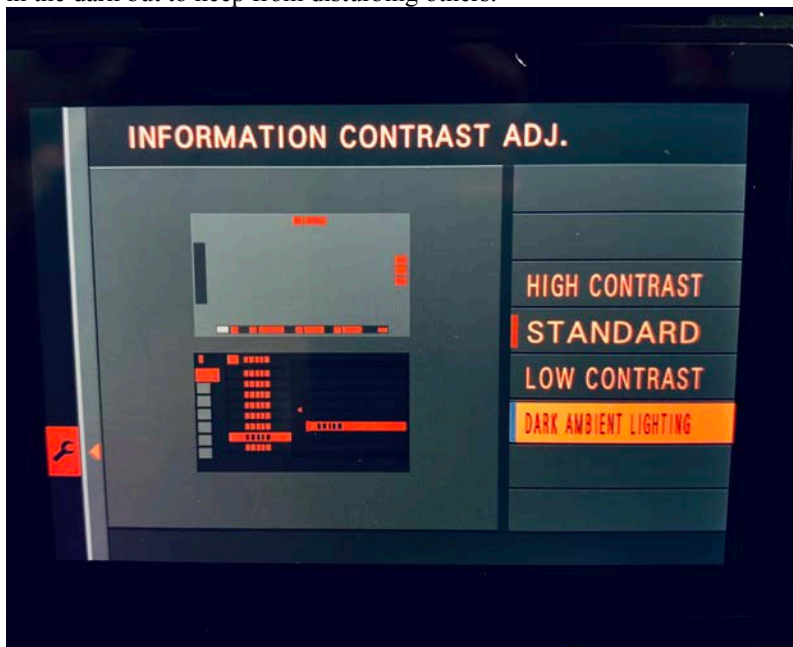
TURN OFF PREVIEW EXPOSURE IN MANUAL MODE

No WYSIWYG EVF display can calculate for flash output, and when shooting flash, time exposure, and manual mode in general turn this setting off to get a view that isn't all black which is what you will get when in the default ON position.



SHOOTING AT NIGHT OR INSIDE CLUBS / DARK EVENTS

Change your menu page to DARK AMBIENT, i.e. red menus for low light shooting, not only not to blind you with your eyes dilated in the dark but to keep from disturbing others.



SCROLL THRU YOUR MENU PAGES!

Don't forget to use your FRONT COMMAND DIAL to scroll quickly thru your menu pages (example 1/3, meaning 3 pages on a sub-menu, such as button/dial settings). Don't use the selector buttons to jog thru the pages, rather use the command dial to go PAGE BY PAGE to find things quickly.

QUICKLY FORMAT SD CARDS SHORTCUT!

On MOST ALL Fujifilm cameras, you can quickly format your SD cards one by one without having to dance thru the menu system. Simply HOLD DOWN & KEEP HOLDING the trash button for 3 seconds and THEN (while still holding the trash button) press in the rear command dial to bring up the FORMAT CARD(S) menu!



TOUCH SCREEN AREA SELECTION

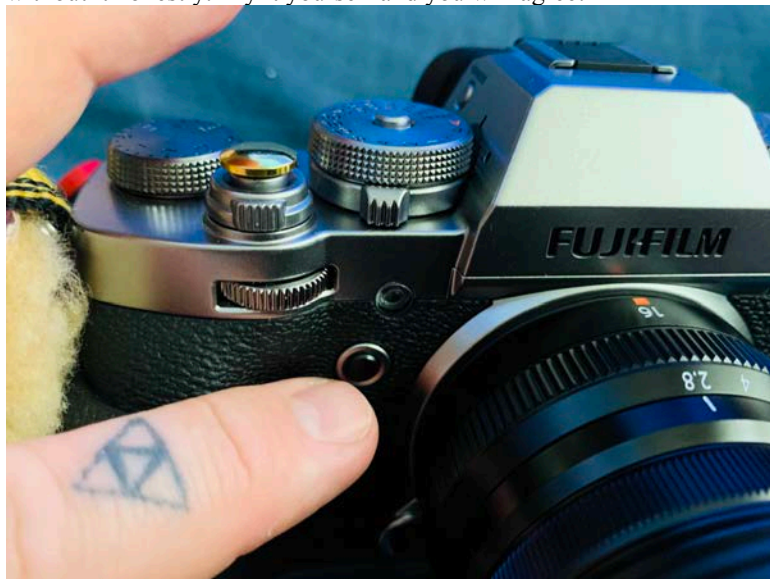
[Settings](#) > [button dial settings](#) > [touch screen settings](#)

Since your camera has no idea the difference between your nose and your finger for touch input, it is extremely important to setup your cameras touch parameters. As a left eye shooter I have my sensitivity set to the bottom left corner only so I can set AF point selection without taking my eye off the EVF. Your selection is of course different and subjective but you need to do this to get the most personalization out of your Fujifilm camera.



REALLY IMPORTANT IDEA TO CONSIDER ASSIGNING THE FRONT FUNCTION BUTTON TO PLAYBACK

Usually I have my other hand on a speedlight or doing something else while shooting, and assigning the front function button to playback is an incredible help. Nobody's right hand on the camera can reach over to the playback button, the other hand is needed. Doing this function button customization makes shooting, review, and return to shooting one handed and very fast; and I cant live without it honestly. Try it yourself and you will agree!



[FUJIFILM GENERAL TIPS](#)

VELLO TTL CABLE FOR YOUR FUJIFILM CAMERA!

While I have piles of speedlights and radio triggers, I can tell you nothing is more useful for any camera than a TTL cable. I recommend these VELLO TTL cables for Canon (same pinouts for the flash as for Fujifilm!). They come in different lengths. Why, you ask, do you need a TTL cable? Many reasons. They're 100% reliable, triggers are not! The cables remove the need for triggers which need batteries and are a common failure point. I would NEVER EVER EVER EVER use a radio trigger for fast action wedding reception, action, or photojournalism; during such times radio trigger reliability, ALL OF THEM, drops to maddening levels of frustration! B&H sells these TTL cables. Just remember that a TTL cable for Fujifilm pinout flash protocols is the same as that for Canon. The ONLY exception to this is the little EF-X8 flash which uses another special pin to give it power, and you cannot use any TTL cable to fire/use the EF-X8 flash.

Vello Off-Camera TTL Flash Cord for Canon Cameras (1.5')

BH #VEOCSC15 • MFR #OCS-C1.5 | ★★★★★ 181 reviews | 12 Questions, 40 Answers




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Length

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3'

6'

Compatibility

Canon

Nikon

Olympus/Panasonic

Pentax

Sony/Minolta

Key Features

BEST LIGHT METER, AND BEST CHEAPEST LIGHT METER

I have owned countless light meters, and there really are only two ultimate options. On the very inexpensive used side, a Minolta IVF flash meter is as useful today as it was so long ago when it came out! Get a used one very cheap on Ebay, just make sure its condition is good working. As the offspring of the 700 series Sekonic, the Sekonic 858 has calibration profiles, can measure T1 times, lighting ratios, a touch screen and more, it's the ultimate light meter and my favorite tool! New price is average \$600



SECRET: FUJIFILM INSTAX ARE THE MOST FUN!

Nothing puts a smile on someones face faster than printing them out an Instax print! In fact I use the LiPlay not as a camera, but as a wifi printer, I take shots from my Fujifilm camera and send it instantly to the LiPlay to print. Or even use my phone at get togethers and print people out some Instax prints!



FIELD CHARGING YOUR CAMERA BATTERIES & MORE

<https://voltaicsystems.com/>

I have no connection to this company, and while there are many different outfits that sell solar chargers, THESE PEOPLE at Voltaic systems are the ones relied upon for durable, reliable solar chargers, and their batteries are like no other for durability, and reliability of charging out in the middle of nowhere, your phone, laptop, and camera batteries. They are the gold standard for those in the deep woods and remote areas on photo shoots where no power exists. I have been using them for years. See their gear in the links below. Likewise they have backpacks with large solar chargers built into them.

CAMERA CRADLES

<https://voltaicsystems.com/camera-chargers/>

SOLAR PANEL

<https://voltaicsystems.com/arc20w-kit/>



PART 1: LARGER SENSORS DO NOT “GATHER MORE LIGHT”

I actually include these three charts into this Fujifilm book because it's a very large misunderstanding seemingly everyone makes. Superficially one would think a sensor is like a window, a larger window “lets in more light”, but the term LIGHT is one thing, and NO DIGITAL SENSOR registers ONE THING. A solar panel does gather ONE THING, voltage and power per unit of time. But no digital sensor works this way for photography. Likewise no light meter on earth has an input for sensor size.

THE TERMS **GATHERED & REGISTERED AS APPLIED TO PHOTOGRAPHY:**

**Terms: GATHER & REGISTERED. BOTH USED TOGETHER
CORRECTLY:**

“ENDLESS MILLIONS OF **REGISTERED POINTS OF
DIFFERENT COLORED LIGHTS OF DIFFERENT INTENSITIES
ARE **GATHERED** AS ONE IMAGE.”**

**NO! LARGER DIGITAL SENSORS DO NOT
“GATHER MORE LIGHT”**

**ALL DIGITAL SENSORS REGISTER
ENDLESS MILLIONS OF POINTS OF LIGHT
AS CHARGE, TO MAKE **ONE IMAGE****

PART 2: LARGER SENSORS DO NOT “GATHER MORE LIGHT”

More light is either more intensity per unit of time, or more time itself which adds up to more light, or greater intensity/saturation of exposure. When you drive from a smaller state to a larger one with the top down on your car, more light does not fall on your head. Exposure is per UNIT AREA, not total area. It is true larger sensor require less enlargement than smaller sensors, but this is not connected to exposure. It is likewise true that larger photosites on a sensor register greater & more light per unit area per unit of time, but this is likewise not connected to sensor size. In fact the most sensitive and best “light gathering” sensor is very tiny (far smaller than any camera sensor) and is roughly 2MP, but it has enormous photosites on it.

“MORE LIGHT” CORRECTLY DEFINED

ALL 3 EXAMPLES OF MORE LIGHT:

MORE INTENSITY #1: Wider aperture (F1.2 vs. f5.6 for example)

MORE INTENSITY #2: Higher luminance (sunny vs. cloudy for example)

MORE LIGHT #3: MORE TIME

NOT AN EXAMPLE OF “MORE LIGHT”

DX sensor vs. FX sensor vs. Med. Format sensor

Examples of less enlargement per X print size, YES (i.e. pixelation issues)

NO DIGITAL SENSOR COLLECTS /

GATHERS LIGHT (MEANING ONE THING, LIKE SOMEONE SAVING ‘MORE MONEY’, MONEY BEING ONE THING)

ALL DIGITAL SENSORS REGISTER LIGHT LOCALLY (per unit area) AS A CHARGE.

ALL DIGITAL SENSORS REGISTER ENDLESS MILLIONS OF DIFFERENT POINTS OF INDIVIDUALLY UNIQUE POINTS OF LIGHT OF DIFFERENT COLORS & INTENSITIES PER UNIT OF TIME

Term: GATHER / COLLECT(IVE):

TOTAL, TOTAL QUALITY, COLLECTIVELY MORE OF SOMETHING WITH A KNOWN TOTAL. GATHER IS COLLECTIVE

Term: REGISTER:

SPECIFIC, LIST, RECORD, INDIVIDUAL, REGISTER IS LOCAL AND UNIQUE (X COLOR AT Y COORDINATE ON SENSOR)

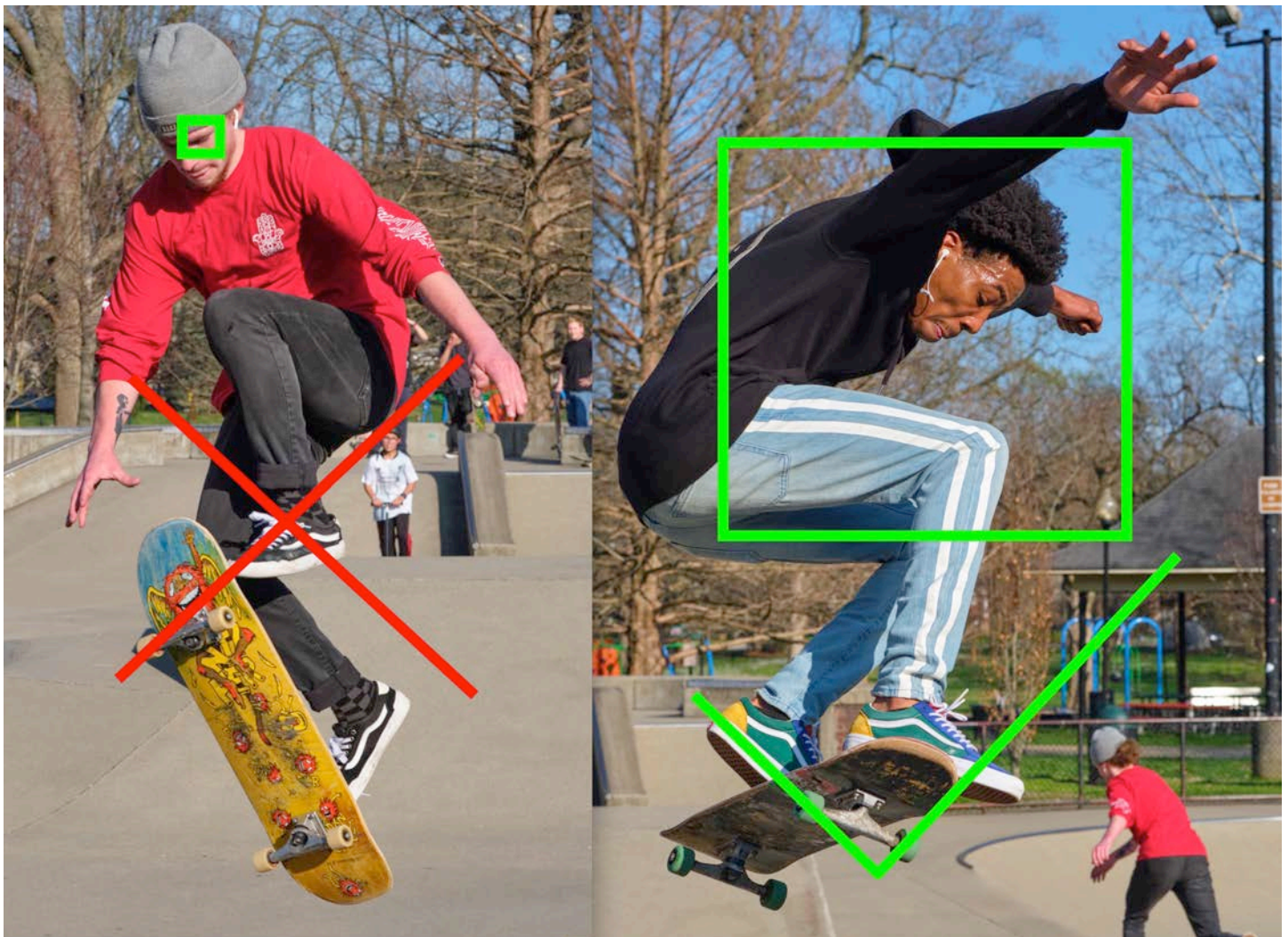
FUJIFILM AUTOFOCUS TYPES, MODES & OPTIONS TRICKS & TIPS

Really the thing that perplexes people the most and which I get the most questions on is what AF TYPE and MODE to use for what situation. Likewise still the frustration people express over their camera when in fact is it the user at fault for not knowing what to tell their camera as to how and what to look for.

I have seen absolutely every major guide and book and including Fujifilm's own autofocus guide on what to do, and I found all of them to be convoluted, at best slightly inaccurate and usually just unhelpful. I think I can say with confidence that I made this autofocus guide "short and sweet" such that if you read this a few times and apply it, your autofocus success will improve fast and greatly so. Likewise don't forget to see in the menus section the important tip on OIS mode 1 or mode 2.

ACTION AF: ACCURACY = AREA! OR POSSIBLY "ACCURACY = MARGIN OF ERROR"

The more anything is CONSTRAINED the less movement and possibilities you have. You surely would not set up a pool table inside your bathroom for instance. When choosing your AF AREA size and type (BOTH ARE JUST AS IMPORTANT!) you need to subconsciously realize all the time what you are telling your camera it has to work with to snap-lock autofocus on. In the case of rapid action for example, like the images below, allow your camera ENOUGH ROOM TO WORK WITH! Almost everyone makes this mistake at first, and then it dawns on them that they have been constraining their cameras ability to do what it can do. A tool is not very good if you don't know how to use it correctly! Likewise by setting up ENOUGH depth of field you can allow your camera to lock onto someones chin or hat rather than the eye and you still have the entire face in focus.



THE THREE AF-S (SINGLE AUTOFOCUS) TYPE + MODE OPTIONS

****REMEMBER: THE DARKER THE COMPOSITION/SUBJECT, THE FASTER THE AF WILL BE UPON INCREASING THE AF AREA SIZE SO THE CAMERA CAN “SEE” MORE IN ORDER TO FOCUS FASTER & ACCURATELY***

AF-S TYPE + SINGLE MODE

This combination is best for very shallow depth of field, pinpoint accuracy of anything in good lighting & macro photography. You should think of this combination as laser precision autofocus for a very tight specific autofocus selection. When doing this do NOT “focus and recompose”, move your AF point selection. This is for AF for very shallow DOF photography where you focus not just on a specific eye but a specific part of an eye, for example close at f1.2 on the 56mm f1.2 Fujifilm lens. **Remember! The darker your composition, the LARGER you should open up the AF AREA box so that the camera has more to “work with” to quickly and accurately acquire focus.**

AF-S TYPE + ZONE MODE

This combination is best for low contrast and or low light distant subjects you would normally use AF-S + SINGLE MODE for. Such as objects behind glass. Low contrast objects at a distance such as a black objects against a black background. Very low light slow moving subjects like a singer on a dark stage. Dark/ low contrast street photography.

AF-S TYPE + WIDE AREA MODE (This combination should be a rare choice for AF tracking & usage)

This combination is best for good lighting / good contrast subjects but is best suited for “cluttered” composition photography of groups of objects or subjects that require fast AF lock/acquisition. Such as a mass of people walking on the street, or a busy composition where single and zone would fail or “hunt”.

THE THREE AF-C (CONTINUOUS AUTOFOCUS) TYPE + MODE OPTIONS

****REMEMBER: THE DARKER THE COMPOSITION/SUBJECT, THE FASTER THE AF WILL BE UPON INCREASING THE AF AREA SIZE SO THE CAMERA CAN “SEE” MORE IN ORDER TO FOCUS FASTER & ACCURATELY***

AF-C TYPE + SINGLE MODE (This combination should be a rare choice for AF tracking & usage)

80%+ of AF-C TYPE continuous autofocus should be AF-C + ZONE, with much of the remaining being AF-C TYPE + WIDE AREA MODE. That being said AF-C + SINGLE MODE should be used for GOOD LIGHTING / CONTRAST moving subjects where you want either isolation (such as a group of the same subjects at different distances away from you and you pick the subject of specific focus) or shallow DOF specificity. You should NOT USE this combination for sweeping subjects moving left to right or right to left, rather moving towards you or away from you. **Remember! The darker your composition, the LARGER you should open up the AF AREA box so that the camera has more to “work with” to quickly and accurately acquire focus. *ALWAYS BE IN BOOST MODE!**

AF-C TYPE + ZONE MODE

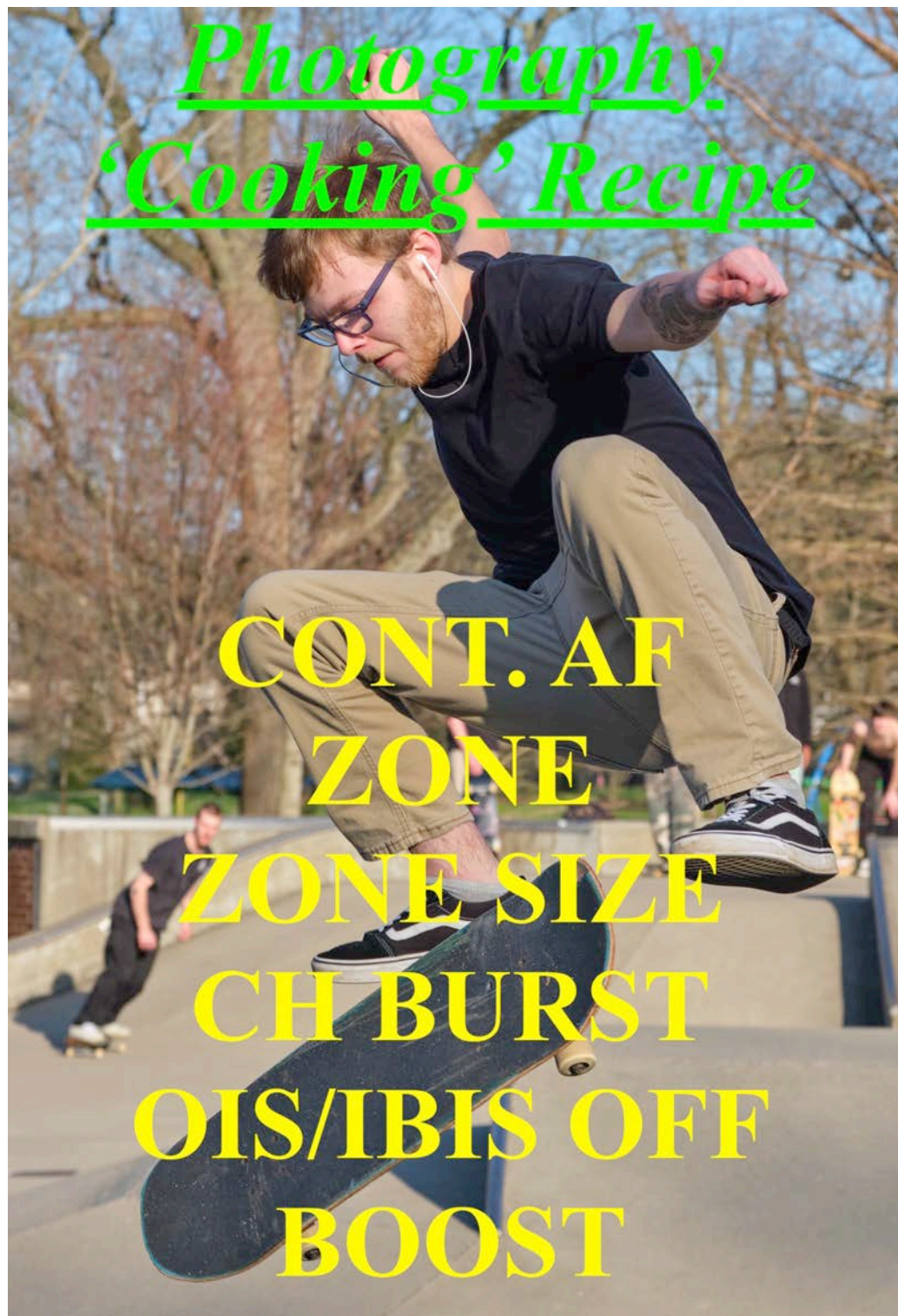
Action, action, action! Birds sweeping across the frame, cars and bikes doing the same, anything appearing suddenly. This is where objects are moving in a manner that you can keep the ZONE box over them for maximum autofocus hit rate. Best suited for telephoto subject tracking for sports, action, wildlife, and especially all manner of bird photography. ***ALWAYS BE IN BOOST MODE!**

AF-C TYPE + WIDE AREA MODE

This combination is best for sweeping subjects both large and medium size (not small birds or likewise!) such as cars, people, moving from left to right or right to left across your chosen frame and background composition. This is also best used for choosing a fixed background composition and using WIDE AREA MODE to “set a trap” for a subject entering your fixed chosen composition.

***ALWAYS BE IN BOOST MODE!**

EVERY SHOT IS A ‘COOKING RECIPE’, THAT YOU AS THE BAKER MUST KNOW THE INGREDIENTS THEREOF
Imagine if a drunken cook baked a pie with salt instead of sugar, I’m pretty sure we all would know the results of that fiasco. It is no different in scoping out WHAT KIND OF (the HOW, the WHERE, the LIGHTING good or bad etc.) SHOTS you’re about to take. When your brain (and this will take time) processes the shooting you’re about to do, it immediately processes the recipe ‘ingredients’ for the camera to THEN KNOW from your input what to do. You might get the recipe 80% accurate, and end up with SOME (key word some here!) accurate results, but far lower than what is easily possible. In the image below, I threw in the six ingredients for this “skater pie” (ROFL) to come out accurately. ABSOLUTELY 100% ALL SHOTS YOU CAN OR WILL MAKE require this mentality of knowing all the ingredients your camera has as the spectrum of possibilities it gives you to cook whatever image you desire to make!



AF MODE AND AREA SIZE TO SUIT THE SHOT. HIT RATE VS. ACCURACY

If you want a specific depth of field, such as the image on the right below, you need to tell the camera, hey, its THIS THE ONLY POINT that I want and choose single point mode and bring the size down to what you need. For action, you need to open up the window of possibilities your camera has to lock onto a fast moving subject if you want that high hit rate for AF accuracy. Likewise setting the distance (if you can) and a DOF enough to capture the shot if the cameras lock-on is not, for example, on the face or eye, but something close. You of course always want accuracy, but you don't want to sacrifice accuracy at the hands of 80% of the shots being out of focus. Always a balancing act must be known at all times in consideration of action photography of any kind.



**HIGH
HIT-RATE**



PINPOINT ACCURACY

AUTOFOCUS TYPE: AF-S (SINGLE AUTOFOCUS) TYPE & AF-C (CONTINUOUS AUTOFOCUS) TYPE

In AF-S TYPE + SINGLE MODE do not "focus and recompose" at any f-stop especially shallow ones because your chosen subject will be blurry and out of focus.

1. AF-S (SINGLE AUTOFOCUS) TYPE is for stationary subjects in most all cases however also for low contrast and low light conditions where, on moderately moving subjects, zone mode is chosen to have the best success at getting correct subject autofocus. At half-press of the shutter release your camera will lock AF on your chosen subject or point with the given MODE and size you have picked for your composition. For mostly the entire part, AF-S TYPE is for stationary subjects, but also for distant moving subjects where it is best used for subject isolation in either multiple subjects or low-contrast/ lighting conditions.

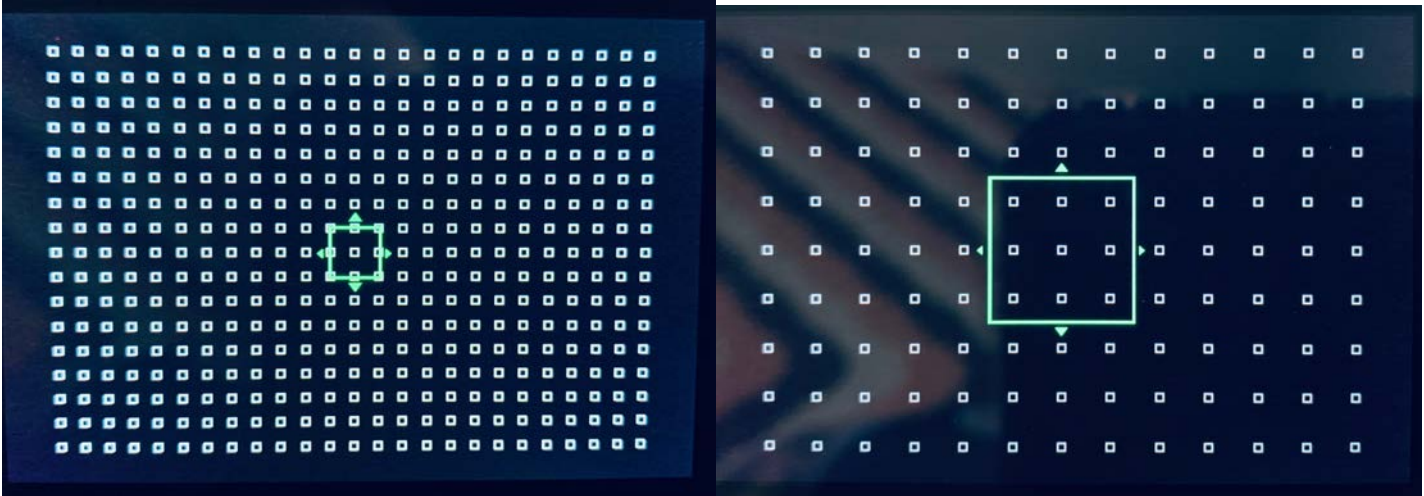
2. AF-C (CONTINUOUS AUTOFOCUS) TYPE is for moving subjects and almost entirely dedicated to sports, action, wildlife, birds & close proximity people etc. Both sweeping subjects from one side of the frame to the other or coming in or out of the frame directly, of which you should learn the correct AF MODE (see above) that needs to be chosen along with the correct AF-C CUSTOM setting to narrow down the parameters for the camera to "know" what to look for specifically.

3. MANUAL FOCUS TYPE is for using 3rd party adapted lenses, time exposures, macro photography, and ultimate control over your composition. Use and learn how to use correctly focus peaking to make this an easy endeavor.



AUTOFOCUS MODE: SINGLE POINT MODE, ZONE MODE, & WIDE AREA MODE

It is extremely important to learn when to use which and for what purpose when it comes to **SINGLE MODE vs. ZONE MODE**. As a general rule (for nuances see the above) ZONE MODE is for action, moving subjects and for nasty low light / low contrast conditions wherein which ZONE MODE is used to greatly improve autofocus hit rate. **WIDE AREA MODE** is for sweeping subjects moving from one side of the frame to the other and is especially useful when you want to frame your background composition and “wait” for the subject to enter. Especially useful also for that same scenario is to be in burst mode of either CL or CH.



THE SIX AUTOFOCUS TYPE & MODE CUSTOMIZATIONS FOR BEST AUTOFOCUS & TRACKING!

If you follow and learn these six steps of autofocus TYPE & MODE customization you will have the absolute best possible conditions every time for successful autofocus tracking and correct AF lock on what you want. Each of these six steps tell the camera a finer and finer point of what and how and who to track (with face detect and eye detect as a subset of #3).

If you go over these six parameters over and over in your mind and in direct execution out in the field you will be better than 99% of every other photographer in having maximum hit-rate success in your autofocus endeavors. After a while this will become sub-conscious muscle memory and you can focus less and less of the camera and more and more on your shot which is so very important. **Every camera ever made is ignorant and it wants your input to narrow down HOW (TYPE), and WHAT (MODE), and WHO (AF-C CUSTOM) to look for!** Thankfully Fujifilm has more parameters of finer and finer autofocus parameters than any other camera out there. These parameters are akin to shotgun “accuracy” vs. rifle “accuracy” in your autofocus hit rate. Learn what each of these six parameters do below and customize each one to the specifics of your composition, action, conditions (lighting etc.), and desires (shallow DOF for example).

The three primary of these six are the first three, which are **TYPE, MODE & AREA**. Or respectively the “HOW”, the “WHAT”, & the “HOW-TO”. You are telling the camera HOW to look (single or continuous, or wide area), then WHAT to look for, either fine (small box) or coarse (big box) but this also tells the camera that the lighting or contrast is good or bad and therefore you give the camera a bigger “window” by which to look and track. The AREA is merely a sub-set and extension of the MODE.

Further still AF MODE is a type of optics, or “glasses” for your camera, if you rob those “glasses” from your camera and you give it a cardboard tube to autofocus thru under bad lighting conditions, its hit rate will frustrate you. This is true of ALL cameras. You need to learn what your camera needs to “see” in order to maximize its autofocus abilities to nail your shot and maximize both speed and accuracy. Maybe in the near future we can talk to our cameras and tell it to “focus on the little dog in the background”, but until that technological time, we have to narrow down, and narrow down even more the parameters using the 6 specifics below to tell the camera how, what and who to look for!

These six parameters are listed in order of greatest to least importance, in narrowing down the autofocus specificity you have tasked the camera to perform for maximum speed and accuracy.

1. AUTOFOCUS TYPE: SINGLE/CONT. AF LEVER SELECTION

2. AUTOFOCUS MODE: SINGLE-POINT/ ZONE/ WIDE TRACKING AF

3. FOCUS-AREA & AREA-SIZE both for AF-S & AF-C. Both for SINGLE AF-POINT MODE & ZONE AF-AREA MODE

4. AF-C CUSTOM SETTINGS

5. BOOST

6. SINGLE SHOT / CL “MEDIUM BURST”/ CH SHOOTING “HIGH BURST”

1: AUTOFOCUS TYPE: SINGLE/CONT. AF LEVER SELECTION

This is the lever on the front (or back in the case of the GFX!) of your camera for choosing the “HOW” of your cameras autofocus, either single (once and lock), or continuous, or manual focus (adapted lenses, or macro, or product). See above for which to use for what reason. *I do not recommend AF-C TYPE for the two current GFX series cameras.*



2: AUTOFOCUS MODE: SINGLE-POINT/ ZONE/ WIDE TRACKING AF

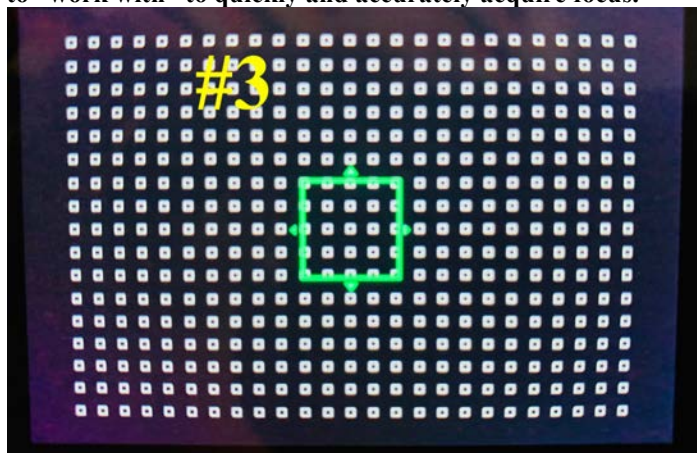
This is the “WHAT” menu option for choosing the parameters of focus, either very specific points (single), or action/ moving subjects or low light (zone), or sweeping subjects in a scene (wide area). See above for parameter specifics of use.



3: FOCUS-AREA & AREA-SIZE both for AF-S TYPE & AF-C TYPE . Both for SINGLE AF-POINT MODE & ZONE AF-AREA MODE

These are the “eyes” or “glasses” of what you give to your camera to see and focus “through”. You are defining the parameters of what you need and want to give your camera in its either narrow (single point) or large (zone) “window” thru which to acquire autofocus lock. The single biggest mistake people make is choking off sufficient light to the camera with a too tiny “window” thru which to acquire autofocus under less than ideal lighting and or contrast!

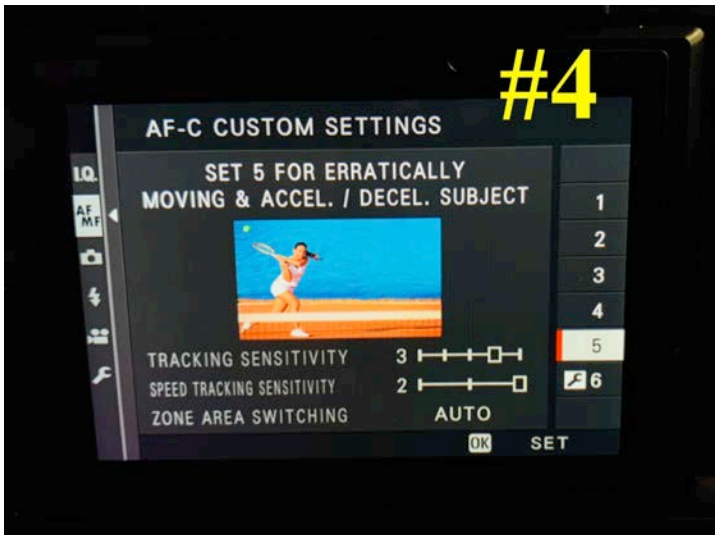
Remember! The darker your composition, the LARGER you should open up the AF AREA box so that the camera has more to “work with” to quickly and accurately acquire focus.



4: AF-C TYPE CUSTOM SETTINGS TO TELL YOUR CAMERA WHAT TO LOOK OUT FOR & HOW-TO

This is for when you are in AF-C TYPE continuous AF. The 6 sections are: **1. Multi-purpose 2. Ignore obstacles & track the subject 3. For accelerating and decelerating subjects. 4. For suddenly appearing subjects. 5. For erratically moving objects. 6. Custom.**

The AI inside your camera is ignorant (as are ALL cameras) for what it needs to look for in autofocus continuous shooting, and the more specific you can tell your camera WHAT to look for, the better and faster, and in so doing, the more accurate the autofocus can and will be.



5: BOOST MODE

Any time you are doing AF-C TYPE continuous photography you SHOULD be in boost mode. For sake of the EVF, tracking, & more you should train your mind to always switch on boost mode when in AFC.



6: SINGLE SHOT / CL “MEDIUM BURST”/ CH SHOOTING “HIGH BURST”

This last step is not really about autofocus tracking but a “how much” subset of your autofocus in that you are telling the camera how much and how often to repeat its ongoing efforts to track and fire at the subject (in this case 99% of the time action) you have tasked it to perform.



HAND HOLDING TIPS & TRICKS

As I mentioned in another tip, handstraps are actually very important in order to remove your hand away from the camera body, all those muscles are fighting each other and cause camera shake. This is also the same reason master archers open their hand on their bow in long distance accuracy shooting. I used to be a champion of 5-spot archery competition. Further more these images below, try them, use your body and arms as steady techniques, the knuckle hold on long lenses is also very effective in removing shake, it removes all muscle contact from the lens body, and this helps a lot! Shown below are the elbow grab and the wrist grab.





LOW LIGHT / LOW CONTRAST AUTOFOCUS TIPS

The one question I get asked all time is about an inability for people to acquire autofocus lock on either moving or stationary subjects in very low light or low contrast situations. **Invariably the issue 90% of the time is that people are in AF-S TYPE Single autofocus and incorrectly in SINGLE MODE with a block, either tiny or larger.** This is a mistake, in order to give your camera as much advantage as possible in very low light and low contrast situations you should do two things. 1. Increase the SIZE of your MODE “box”, if this can be accomplished in SINGLE MODE, all the better, but if the conditions are bad: 2. You MUST go into ZONE MODE to give your camera a much better chance to “see” and lock focus.

Additionally if the subject is moving and the conditions are bad, **do not even consider SINGLE MODE, rather ZONE MODE.** Why? Because the same sized large box between Single Mode and Zone Mode are NOT the same even though they’re the same size; in Zone Mode the camera hunts around that box whereas in Single Mode the camera only looks at the entire box as one entity.

All cameras are ignorant, they don’t know what they need to look for and you need to tell them, that’s why the six steps above are so important, you narrow the window of telling the camera “hey, look for this kind of subject moving that kind of way, not that kind”. This is the sole reason for the existence of WIDE ANGLE tracking and specifically AF-C CUSTOM tracking parameters. Also too, for subjects roughly 20 feet or less from you, turn ON your AF-ASSIST beam in your menu under bad lighting. Some clubs will not allow AF-assist lights however.

While no camera can autofocus on a black cat at night in the bottom of a coal mine (unless you use the AF ASSIST beam!), all other conditions, if you follow these steps, will greatly improve your autofocus hit rate.



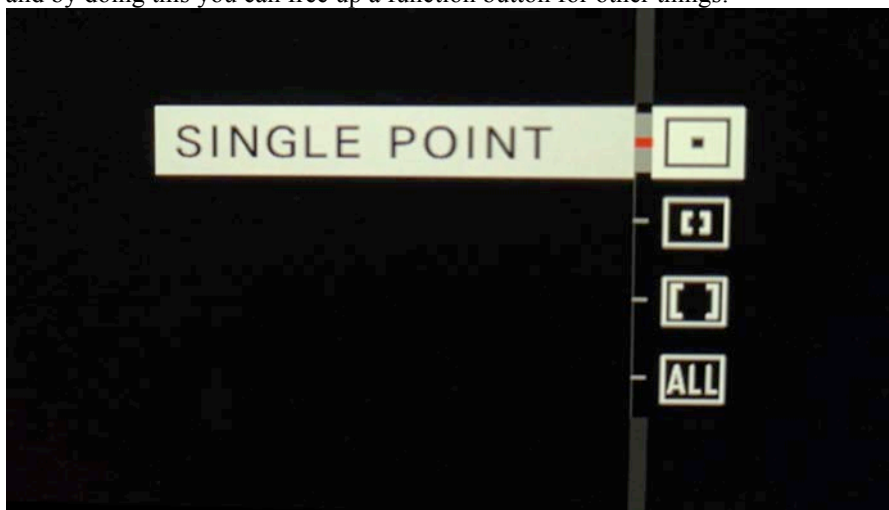
ACTION TYPE & DISTANCE TO SUBJECT

There are two main considerations for nailing AF and not letting your point of focus fall out of depth of field. There are three types of action: slow, moderate, & fast. Slow action such as people walking, the moving bird below walking around, a dog meandering around. Moderate action such as a rider galloping on a horse, or fast walking people. Lastly of course fast action, such as birds in flight, cars, bikes, jumping horses, skateboarders etc. The further away your subject the more likely your DOF “trap” will catch your subject appropriately. Such that worries over nailing AF at f2.8 with the 50-140 on a fast skateboarder 25+ yards away is of little concern which is why you need to be in ZONE MODE for such fast action. When in AF-C TYPE you can also use SINGLE MODE to capture slow or moderately moving subjects like the people walking or the meandering dog/ cat for example, and also using that small SINGLE MODE “window” for subject isolation from other subjects.



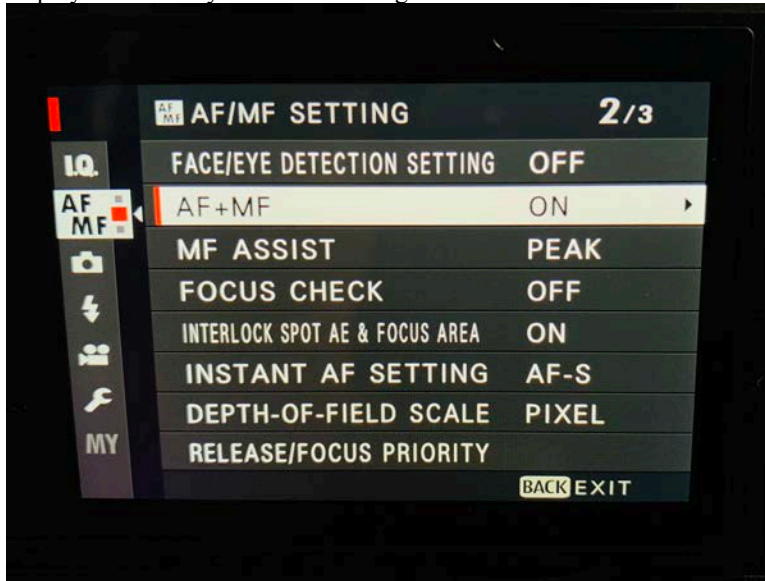
CHOOSE “ALL” FOR AUTOFOCUS SELECTION FROM MENU

If you choose MODE “ALL” you can, upon clicking the joystick, scroll with your command dial thru all selections in increasing sizes from single point thru zone, and lastly to wide area. I keep my mode in the “ALL” setting which lets me quickly change modes without having to use a function button and then move over to a different mode saving time. Function button “real estate” is precious and by doing this you can free up a function button for other things.



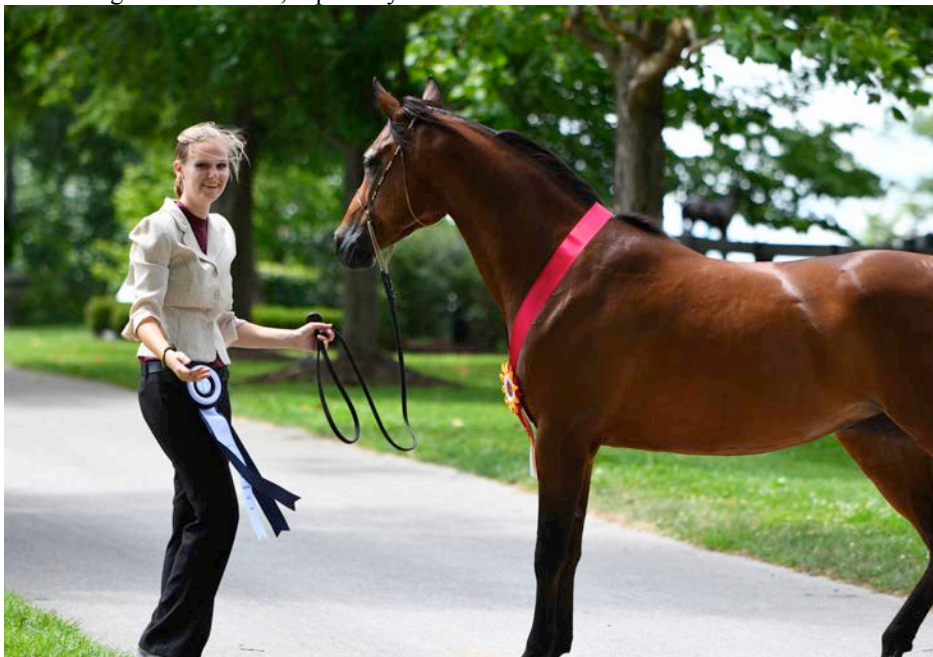
AF+MF IS VERY USEFUL

This should be called “manual focus override” since what it enables when turned on, is when in single AF mode, and the camera acquires focus, you can at that time turn the lens’ focus ring for focus fine turning and focus peaking, which is then immediately displayed to assist you. Under low light and adverse conditions this is extremely useful! Try it, I bet you’ll love it.



FOCUS EXAMPLES. WHAT WOULD YOU USE AND WHY?

Horse and rider: There is very little movement and no ‘action’ in this shot when I took it, as is the case with the 50-140 (you may not be able to see that) I was about 15 yards from the subject. I used single AF TYPE and single MODE on this composition. If the lighting was worse under the exact same shot, I would have used single AF TYPE and ZONE MODE. If for example this was a non-posed candid shot and she was merely turning into the lens and I wanted to quickly grab the shot I would have used ZONE MODE for certain, however due to the great lighting either single AF TYPE or continuous AF TYPE would have worked. Of course it goes without saying that with any of these modes I would need to move the single or zone MODE box to what I wanted to be in focus, either the girl or the horse, especially if the DOF was shallow.



Horse and rider again, this time in moderate action and riding: In this shot the rider and horse are galloping roughly 20 yards away and I was using a 250mm GF lens on my GFX. This is a GFX anomaly which would NOT apply to X series cameras, such that continuous autofocus on the GFX series is not very good (however its still the fastest MF camera that exists!). This is why I used AF-S TYPE and ZONE MODE. Why not single MODE, since there is really good lighting? Because at the F4 aperture in order to nail face focus, I needed the fastest possible acquisition time immediately as I am taking the shot. Action photography, which medium format is not best at (I said not best, I did not say bad at!) requires all best possible scenarios be in place to get the shot, and this necessitates ZONE MODE. This is moderate action (**between walking as low action, and running, fast cars, birds etc. as fast action**) and is the upper limit of GFX camera current autofocus abilities. The new GFX100 is supposed to have up to 50% and higher faster AF abilities. If this was the same shot with the X series and say a 55-200mm lens, I would have been using AF-C TYPE and ZONE MODE.



Horse and rider again, this time fast action jumping: As you can tell this is fast action, however its at a distance of 50+ yards, so almost all concerns of missing the DOF mark are not a point of worry. This shot was taken with AF-C TYPE and ZONE MODE autofocus. I was shooting in CH.



Colored pencils up close: This is an absolute control shot with macro, and even f11 is a shallow DOF on a macro lens, in this case I want absolute control over my point of AF and I have absolute control over lighting, this also applies to product photography. I use an ambient LED for focus control and shoot only in AF-S TYPE and SINGLE MODE since DOF is both shallow and critical.



Skater making the leap: This is shot at roughly 15 yards with the 50-140 or even the 55-200 and I use AF-C TYPE and ZONE MODE to capture the fast moving action. You should not really consider another option than this if your panning with the subject, however if you're setting an AF "trap" you could use AF-C TYPE and WIDE AREA ZONE to grab the shot as the skater enters the frame. I was shooting in CH.



Bird catching a crab: There are serious bright light and contrast issues when this shot was taken, and to not ruin the shot and miss the birds eye I was in AF-C TYPE, SINGLE MODE but with a moderate sized AREA. I stopped down a bit and was shooting in CH.



Low lighting cat shot: Since DOF here is critical with the 56mm f1.2 at f1.4 I choose AF-S type and SINGLE MODE with a small AREA to capture the eye of the cat. Often in such cases since cats don't stay still, multiple tries are normal for everyone with any camera since DOF is so shallow.



Bird in flight with the 200mm f2. Since the subject is 50+ yards away, worries about DOF at any aperture are barely a concern, however stopped down to F8 and using AF-C TYPE with ZONE MODE and smallest AREA of ZONE MODE to grab the bird correctly. I was shooting in CH.



Frog on hand: DOF here is my critical point with maximum bokeh. Since there is sufficient lighting, and no real action but my shaky hand, I use AF-S TYPE and SINGLE MODE with a small AREA to nail the eye of the frog, without which the shot is lost.



FUJIFILM X SERIES LENSES, REVIEWS, RECOMMENDATIONS & TIPS

FUJIFILM X SERIES LENSES

Please note that these lens recommendations and comments below are of course subjective, but they come with the caveat that I own all of these X series lenses (but for the 18mm), and I have tested and used all of them extensively. I have an extremely broad and far reaching experience with lenses, their nuances, & characteristics of rendering. Ultimately I have to state my motto when people praise or hate lenses, which is “compared to what?!” Well my comparison list is extremely extensive.

I painstakingly went over all of these lenses overall scores and values no less than 20 times. As an owner of all of them (but the 18mm) I put them in their respective places based on what they are in themselves, but also compared to their peers in the Fujifilm series of lenses. Again, for any who will complain or wonder about my scores, it's “compared to what?”.



KEY

- 1. Overall score & Value** are in bold and red if the lens scores a 9 or 10
- *MICROCONTRAST WINNER FOR TONALITY IN OUTPUT***....this indication on a lens means it's an image fidelity winner with great tonality and ideal for B&W image rendering.
- 3. An AS PERFECT optical instrument**... this indicates the lens is at the absolute pinnacle of near-perfect (no perfect optics exist anywhere!) optical excellence.
- 4. NOT for video use!!**....this indicates that the lens is slow and or noisy and is NOT recommended for video usage at all.
- 5. *PERFECT DUAL SCORE & VALUE!***... this indicates that this lens is a dual 10 score in both value and overall score.

My favorite X-series lenses in no specific order are (with my TOP 8 favorites highlight in red):

FUJINON LENS XF 55-200mm F3.5-4.8 R LM OIS

FUJINON LENS XF 50-140mm F2.8 R LM OIS WR

FUJINON LENS XF 16-80mm F4 R OIS WR

FUJINON LENS XF 18-135mm F3.5-5.6 R LM OIS WR

FUJINON LENS XF 18-55mm F2.8-4 R LM OIS

FUJINON LENS XF 8-16mm F2.8 R LM WR

FUJINON LENS XF 200mm F2 R LM OIS WR

FUJINON LENS XF 80mm F2.8 R LM OIS WR Macro

FUJINON LENS XF 56mm F1.2

FUJINON LENS XF 50mm F2 R WR

FUJINON LENS XF 35mm F1.4 R

FUJINON LENS XF 16mm F1.4 R WR

FUJINON LENS XF 16mm F2.8 R WR

FUJINON LENS XF 23mm F1.4 R

ZOOM LENSES

FUJINON LENS XF 55-200mm F3.5-4.8 R LM OIS

Overall score out of 10: 9

Best used for: Travel telephoto, telephoto landscapes, event photography, press, sports, action.

Shortcomings / Not best for: Portraiture, shallow DOF work, not a pick for video use.

Value out of 10: 10

Observations: Fast AF, the single best telephoto travel lens, lightweight and compact!

FUJINON LENS XF 100-400mm F4.5-5.6 R LM OIS WR

Overall score out of 10: 8

Best used for: Wildlife, sports, action, event, press work

Shortcomings / Not best for: Bokeh is not so great, not extremely sharp, less than desirable rendering, slow aperture

Value out of 10: 7

Observations: I'm frankly very spoiled on long-telephoto glass from Nikon & others, so I have to be fair to this lens in itself, however it comes up short as an extremely pleasing telephoto sports, action, wildlife lens to me. However of course it weighs a ton less than said tele-giant lenses I am used to! I have used this lens for wildlife with very good results, but have always been left wanting compared to same-situation use with, for example the 200-500 Nikkor, 300mm 2.8; so setting aside my subjective bias, and admitting the AF is superior as well as tracking I have rated this lens score and value accurately! I always enjoy using this lens, but my brain is always comparing it to superior output from the above stated glass. Nikon & Canon have 35+ years over Fujifilm in the long telephoto glass dept., even though Fujifilm has been making superior large format and etc. glass for many decades, they have not been doing so on the long distance huge-glass telephoto lens dept. They have however nailed it on the 200mm f2.

FUJINON LENS XF 50-140mm F2.8 R LM OIS WR

Overall score out of 10: 9

Best used for: Wedding, photojournalism, street, portraiture, sports, and action. Good for video use!

Shortcomings / Not best for: Wildlife, however fine for near-wildlife.

Value out of 10: 9

Observations: Lightweight, an ideal 70-200 equivalent DX lens in the Fujifilm X series. Great superfast and silent AF

FUJINON LENS XF 18-135mm F3.5-5.6 R LM OIS WR

Overall score out of 10: 9

Best used for: TRAVEL! Single Do-it-all lens! Fujifilm's one and only Ultra-Zoom lens!

Shortcomings / Not best for: Video, portraiture, landscapes, interiors

Value out of 10: 10

Observations: I always take this lens when flying and travelling light! I love it, the output is far more than merely acceptable, considering that ultra-zoom lenses are famous for being merely "ok" at best! Good OIS, very good output!

FUJINON LENS XF 18-55mm F2.8-4 R LM OIS

Overall score out of 10: 8

Best used for: Video, all-purpose, portraiture, street, travel, still life, documentary.

Shortcomings / Not best for: telephoto work.

Value out of 10: 10

Observations: While most camera mfg. kit lenses are cheap "good enough" lenses, the 18-55 is actually an amazing lenses, and it can be found very cheap used, is great for video use, and general purpose, has great OIS, is small and compact and renders beautifully. Fujifilm made sure their kit lens would be a great winner, and it is! Fast and silent AF.

FUJINON LENS XF 16-80mm F4 R OIS WR *PERFECT ZOOM LENS!*****

Overall score out of 10: 10

Best used for: Portraiture, Travel, Video, all-purpose, street, travel, still life, documentary.

Shortcomings / Not best for: not applicable

Value out of 10: 10

Observations: Very fast autofocus, very sharp, amazing bokeh. Extremely rare (and nearly impossible status) PERFECT ZOOM LENS!

FUJINON LENS XF 16-55mm F2.8 R LM WR

Overall score out of 10: 8

Best used for: Video! Portraiture, weddings, a general all around lens.

Shortcomings / Not best for: no OIS, big and heavy, expensive

Value out of 10: 8

Observations: Fast and silent AF perfect for video, an ideal 24-70 equivalent lens for portraiture and weddings. Extremely great build quality and fast mid-range zoom lens.

FUJINON LENS XF 10-24mm F4 R OIS

Overall score out of 10: 7

Best used for: Landscape and architecture, interiors. A compact wide angle travel lens.

Shortcomings / Not best for: Slow and noisy AF. **NOT for video use!!**

Value out of 10: 7

Observations: All but entirely superseded by the much superior, however heavy and expensive, 8-16mm. Still an excellent compact ultrawide zoom with OIS!

FUJINON LENS XF 8-16mm F2.8 R LM WR

Overall score out of 10: 10

Best used for: Landscape, architecture, close quarters, real estate, indoors

Shortcomings / Not best for: Portraiture, lightweight travel

Value out of 10: 9

Observations: Very fast and silent AF. Expensive, large, heavy, no filters possible. Incredibly sharp. Truly an ultrawide zoom marvel of optical excellence! **An AS PERFECT optical instrument.**

PRIME LENSES

FUJINON LENS XF 200mm F2 R LM OIS WR

Overall score out of 10: 9

Best used for: Sports, action, wildlife, portraiture, documentary

Shortcomings / Not best for: Slightly busy bokeh, heavy, expensive, but not compared to its brethren by different manufacturers.

Value out of 10: 8

Observations: Lighting fast and silent AF, Incredible (even more so than Nikons best ultra-expensive huge primes) build quality and attention to detail. Comes with a 1.4X teleconverter and nice zippered case. This is the topmost pinnacle of lens design by anyone. Made even better and sharper than the 200mm f2 Nikkor (which I also own). **An AS PERFECT optical instrument.**

FUJINON LENS XF 90mm F2 R LM WR

Overall score out of 10: 9

Best used for: Portraiture, sports, action.

Shortcomings / Not best for: indoor shooting, low light.

Value out of 10: 8

Observations: Less than perfect bokeh, no OIS, should be a faster aperture for its main intent, portraiture. The second fastest AF Fujifilm lens. Razor sharp!

FUJINON LENS XF 80mm F2.8 R LM OIS WR Macro *PERFECT DUAL SCORE & VALUE!*

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 10

Best used for: Macro, portraiture, product photography, telephoto landscape, weddings, video, general purpose!

Shortcomings / Not best for: NONE

Value out of 10: 10

Observations: **An AS PERFECT optical instrument.** Easily the best macro lens ever made by anyone! Razor sharp beyond belief! Fujifilm's fastest AF lens. This is my #2 must own Fujifilm lens which serves many purposes excellently. Amazing OIS. Worth every cent.

FUJINON LENS XF 60mm F2.4 R Macro

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 8

Best used for: Macro, portraiture, general purpose, great still life lens.

Shortcomings / Not best for: Very slow and noisy AF. **NOT for video use!!**

Value out of 10: 9

Observations: Very cheaply priced, incredible bokeh and great for portraiture, very small and compact lens. I love this lens! This lens actually has incredible microcontrast and better bokeh than the 56mm 1.2 at f2.4.

FUJINON LENS XF 56mm F1.2 R

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 10

Best used for: Portraiture, weddings

Shortcomings / Not best for: Fast AF necessities. **NOT for video use!!**

Value out of 10: 9

Observations: This is Fujifilm's portrait lens with the same FOV as a 85mm FX lens at f1.4. Onion ring bokeh due to extremely slight internally unpolished element(s). **An AS PERFECT optical instrument.**

FUJINON LENS XF 56mm F1.2 R APD

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 9

Best used for: Portraiture, weddings

Shortcomings / Not best for: Very expensive! Fast AF necessities. **NOT for video use!!**

Value out of 10: 5 (however if you really need or want this soft and puffy bokeh, value score is meaningless here)



Observations: This is the APD (apodization filter addition internal) version of the 56mm f1.2, the internal filter reduces focal plane light very slightly, however the OOF effect of this very expensive lens is minimal to none. The most dramatic effect is using specular OOF background composition. This is Fujifilm's portrait lens with an as same FOV as a 85mm FX lens at f1.4. Cotton candy soft bokeh due to the graduated internal AD filter. Onion ring bokeh due to extremely slight internally unpolished element(s). See example difference in image above. **An AS PERFECT optical instrument.**

FUJINON LENS XF 50mm F2 R WR

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 9

Best used for: General purpose, mid-range subject photography. Near-telephoto FOV.

Shortcomings / Not best for: portraiture, short-range subjects.

Value out of 10: 9

Observations: Amazing output, incredible microcontrast for BW tonality, fast and silent AF, 75mm FOV. One of my favorite Fujifilm lenses.

FUJINON LENS XF 35mm F2 R WR

Overall score out of 10: 7

Best used for: Street, travel, documentary, general purpose

Shortcomings / Not best for: portraiture, poor bokeh.

Value out of 10: 6

Observations: No competition at all for the image output compared to the 35mm 1.4, however its fast AF, inexpensive, compact and a great 50mm FOV equivalent lens for travel.

FUJINON LENS XF 35mm F1.4 R *PERFECT DUAL SCORE & VALUE!*

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 10

Best used for: Everything! Portraiture, street, amazing bokeh. A 50mm equivalent lens that renders great!

Shortcomings / Not best for: Aperture chatter, slow and noisy AF, **NOT for video use!!**

Value out of 10: 10

Observations: While having both slow AF and noisy, this lens is an older classic X series lens that actually renders amazing and is a pure joy to own and use! **An AS PERFECT optical instrument.**

FUJINON LENS XF 27mm F2.8

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 7

Best used for: pancake lens perfect for stealthy use, travel, and general purpose. Amazing image output.

Shortcomings / Not best for: Grindingly very slow AF! Very noisy AF! **NOT for video use!!**

Value out of 10: 7

Observations: Very inexpensive, especially used, the 27mm is very sharp, and has great output, but it is obnoxiously slow and noisy, Fujifilm's slowest lens, but that's due to restrictions of design and AF motor for such a tiny lens.

FUJINON LENS XF 23mm F2 R WR

Overall score out of 10: 7

Best used for: Street, travel, documentary, video, general purpose

Shortcomings / Not best for: Soft wide open, clears up at f4. Moderate AF speed.

Value out of 10: 8

Observations: Great compact lens, perfect for travel, street and general purpose 35mm equivalent lens. Sharp at f4 and smaller.

FUJINON LENS XF 23mm F1.4

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 9

Best used for: Street, portraiture, general purpose, documentary, travel, great bokeh!

Shortcomings / Not best for: Slow and noisy AF. **NOT for video use!!**

Value out of 10: 9

Observations: A wonderful and often overlooked ideal older Fujifilm X series lens that renders beautifully. Amazing bokeh and output. **An AS PERFECT optical instrument.**

FUJINON LENS XF 18mm F2 R

Overall score out of 10: 4

Best used for: pancake 'street sweeper' lens. However there are many other Fujifilm lenses that replace this that are far superior.

Shortcomings / Not best for: **NOT for video use!!** Slow and noisy AF. Rendering is undesirable in my conclusion.

Value out of 10: 4

Observations: While very compact, this lens has multiple rendering issues, its an old design and both slow and noisy. Entirely superseded by other far better lenses.

FUJINON LENS XF 16mm F2.8 R WR

Overall score out of 10: 8

Best used for: Street, stealthy compact travel lens! Still life. Long exposure. I would easily state this is the best compact travel lens!

Shortcomings / Not best for: Soft wide open, clears up entirely at f5.6. Great for video use! FAST AF!

Value out of 10: 9

Observations: Inexpensive, very tiny, amazing little lens and an almost pancake size wonder-lens!

FUJINON LENS XF 16mm F1.4 R WR *PERFECT DUAL SCORE & VALUE!*

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 10

Best used for: Landscapes, astro, interiors, street, real estate, still life, Near-Macro and even more!

Shortcomings / Not best for: Portraiture, noisy AF, slowish AF, **NOT for video use!!**

Value out of 10: 10

Observations: Absolutely my fave Fujifilm X series lens. You can get also extremely close with this lens. Sharp as a razor. Absolutely the single best wide angle lens I have ever used or tested by anyone! **An AS PERFECT optical instrument.** This is my #1 must own Fujifilm lens

FUJINON LENS XF 14mm F2.8 R

Overall score out of 10: 7

Best used for: Landscapes, astro, interiors, real-estate. Long exposure.

Shortcomings / Not best for: Distortion, slow and noisy AF, however for still subjects its designed for this is not an issue. **NOT for video use!!**

Value out of 10: 6

Observations: Mostly now superseded by the incredible 8-16mm zoom, I had little love to begin with on this lens and even less now. When asked “what is wrong with this lens that you don’t like it?”... the answer for this lens is certainly so “its perfectly adequate”, as implied “you can live on bread and water”,... but its not desirable to do so. Its still a wonderful wide angle prime Fujifilm lens however. Once again, “compared to what?” is the real answer.

FUJIFILM AUTOFOCUS X MOUNT LENSES OFF-BRAND VILTROX. A GREAT VALUE!

FUJIFILM X-MOUNT VILTROX 85mm 1.8 & 33mm 1.4

At the time of this edition only the 85mm f1.8 and 33mm f1.4 are out for use. Both have a USB port on the bottom for firmware updates, both are very well made with the 33mm having a metal lens hood. These lenses are very inexpensive and both have very snappy autofocus and puffy nice bokeh. Both suffer flare from strong incident light, but at this price, there's nothing anyone can complain about, they're quite wonderful!



VILTROX 33mm f1.4

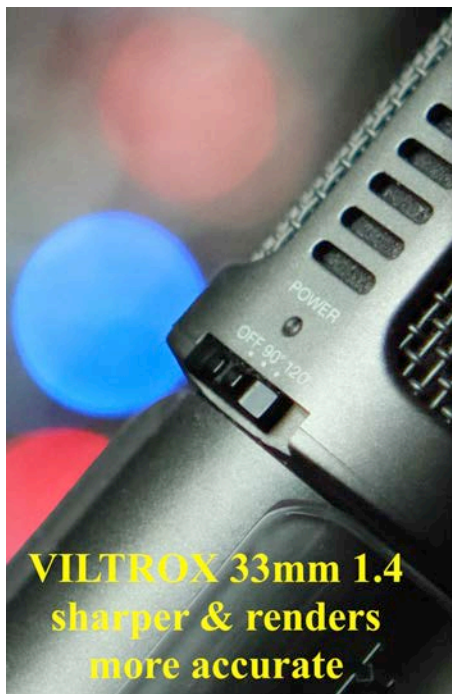
Overall score out of 10: 10

Best used for: Everything really, fast AF, sharp, and a great price!

Shortcomings / Not best for: At this focal length, no shortcomings evident

Value out of 10: 10

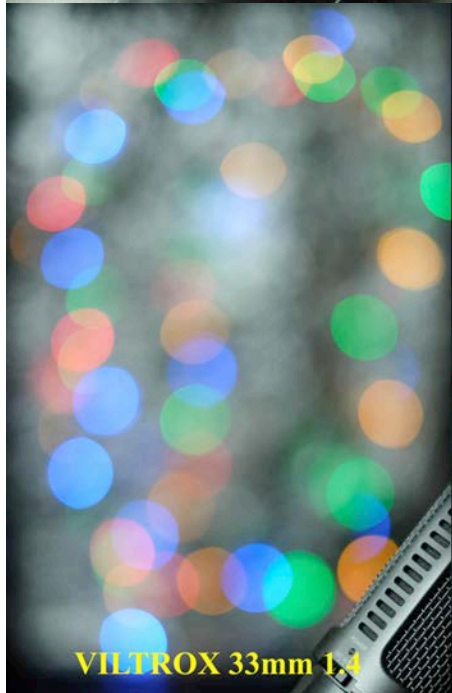
Observations: Sharper than the Fujifilm 35mm 1.4 (see below), much much faster autofocus! Metal lens hood, incredibly cheap price. Plenty sharp, puffy bokeh.



VILTROX 33mm 1.4
sharper & renders
more accurate



FUJI 35mm 1.4



VILTROX 33mm 1.4



FUJI 35mm 1.4

VILTROX 85mm f1.8

Overall score out of 10: 10

Best used for: Portraiture

Shortcomings / Not best for: Interiors

Value out of 10: 10

Observations: Sharp, fast autofocus! Incredibly cheap price. Puffy bokeh.

FUJIFILM GF SERIES LENSES, REVIEWS, RECOMMENDATIONS & TIPS

FUJIFILM GFX TRIO COMPLETE AS OF 2019

As of mid 2020, all 10 GF lenses are out. I have a complete review both on youtube but also within this book in the section on primary Fujifilm cameras. Ten lenses currently are out for the GFX cameras with 2 more announced for the near future.



FUJIFILM GF SERIES OF LENSES

Please note that these lens recommendations and comments below are of course subjective, but they come with the caveat that I own all of these GF series lenses for the GFX system, and I have tested and used all of them extensively. I have an extremely broad and far reaching experience with lenses, their nuances, & characteristics of rendering. Ultimately I have to state my motto when people praise or hate lenses, which is “compared to what?!” Well my comparison list is extremely extensive.

I painstakingly went over all of these lenses overall scores and values no less than 20 times. As an owner of all of them I put them in their respective places based on what they are in themselves, but also compared to their peers in the Fujifilm series of lenses. Again, for any who will complain or wonder about my scores, it’s “compared to what?”.



KEY

1. **Overall score & Value** are in bold and red if the lens scores a 9 or 10
2. ***MICROCONTRAST WINNER FOR TONALITY IN OUTPUT***....this indication on a lens means it's an image fidelity winner with great tonality and ideal for B&W image rendering.
3. **An AS PERFECT optical instrument**... this indicates the lens is at the absolute pinnacle of near-perfect (no perfect optics exist anywhere!) optical excellence.
4. **NOT for video use!!**....this indicates that the lens is slow and or noisy and is NOT recommended for video usage at all.
5. ***PERFECT DUAL SCORE & VALUE!***... this indicates that this lens is a dual 10 score in both value and overall score.

Perfect TRAVEL TRINITY GF lenses

FUJINON LENS GF 45mm F2.8 R WR
FUJINON LENS GF 45-100mm F4 R LM OIS WR
FUJINON LENS GF 100-200mm F5.6 R LM OIS WR

Perfect WEDDING TRINITY GF lenses

FUJINON LENS GF 23mm F4 R LM WR
FUJINON LENS GF 45-100mm F4 R LM OIS WR
FUJINON LENS GF 110mm F2 R LM WR

My 4 favorite GF-series lenses in no specific order are:

FUJINON LENS GF 45mm F2.8 R WR

FUJINON LENS GF 23mm F4 R LM WR

FUJINON LENS GF 45-100mm F4 R LM OIS WR

FUJINON LENS GF 100-200mm F5.6 R LM OIS WR

GFX ZOOM LENSES

FUJINON LENS GF 32-64mm F4 R LM WR

Overall score out of 10: 9

Best used for: A catch all / do it all GFX lens, a 24-50mm FOV equivalent mid-range zoom lens.

Shortcomings / Not best for: Portraiture, landscapes. Huge & heavy

Value out of 10: 10

Observations: This is the ONE lens most people should have if they had no other. Very fast AF, extremely useful across a broad spectrum, while a jack of all trades, I cannot say it's a master of any other than versatility. However output is amazing, and a very desirable GFX lens nobody would be unhappy to own or use.

FUJINON LENS GF 45-100mm F4 R LM OIS WR *PERFECT DUAL SCORE & VALUE!*

!!*SINGLE MOST USEFUL GFX LENS*!!

Overall score out of 10: 10+

Best used for: Portraiture, Tele-Landscape, MACRO!! w/ MCEX-18G Fujifilm Macro Extension tube, Street, Travel. Short range action. Do it all GFX lens, a 36-80mm FOV equivalent mid-range zoom lens. Perfect medium format GFX lens for weddings & indoor events!

Shortcomings / Not best for: NONE!

Value out of 10: 10+

Observations: Puffy bokeh, a "poor mans" portrait lens, likewise with MCEX-18G a "poor man's" MACRO lens; also perfect for many other uses, including travel and Tele-landscape. OIS makes it a great lens for both GFX50 series and GFX100 for great stabilization. Not too-heavy for one hand holding of camera with this lens dangling off the mount. Basically the same size as the 110mm f2 GF lens.

FUJINON LENS GF 100-200mm F5.6 R LM OIS WR *PERFECT DUAL SCORE & VALUE!*

Overall score out of 10: 10

Best used for: Action, sports, wildlife, mid-range telephoto work of all & any kind. Low light with OIS. a 79-158mm FOV equivalent mid-range zoom lens.

Shortcomings / Not best for: indoor

Value out of 10: 10

Observations: Stunning OIS, Incredibly lightweight, the tripod collar is overkill and not necessary at all, unless being used for tripod use, best removed and stored away. Shockingly even though it's an f5.6 lens, it has incredible bokeh! My second favorite GFX lens! Fast and silent AF. "Sister lens" to the 32-64 and likewise the 100-200mm.

GFX PRIME LENSES

FUJINON LENS GF 250mm F4 R LM OIS WR

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 9

Best used for: telephoto landscapes, portraiture, action, wildlife.

Shortcomings / Not best for: street, indoor. Huge & heavy.

Value out of 10: 10

Observations: Very large and heavy, but with amazing OIS, front AF-ON buttons are beloved. Fast and silent AF. **An AS PERFECT optical instrument.**

FUJINON LENS GF 120mm F4 R LM OIS WR Macro

Overall score out of 10: 6

Best used for: Macro, telephoto landscapes

Shortcomings / Not best for: Excessively large, slow aperture, less than impressive rendering

Value out of 10: 6

Observations: Absolutely my least favorite GFX, however it's adequate in the sense of oatmeal will keep you alive, it sees no use from me even though I'm a macro fanatic. AF is fast & snappy, however this lens falls short of what it could have been.

FUJINON LENS GF 110mm F2 R LM WR

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 9

Best used for: Portraiture, fashion, fine art

Shortcomings / Not best for: street, landscape

Value out of 10: 9

Observations: This is the 85mm f1.4 equivalent true portrait lens for the GFX system and it does not disappoint, however one should realize this wonderful 'one trick pony' lens was designed for that and exactly that. Truly this is a headshot and portraiture money maker as mounted on any GFX camera! Fast and silent AF. **An AS PERFECT optical instrument.**

FUJINON LENS GF 63mm F2.8 R WR

Overall score out of 10: 7

Best used for: lightweight 50mm "do it all" (but nothing well) lens. Adequate milk toast small 'normal' lens.

Shortcomings / Not best for: Portraiture, landscapes, honestly I cannot say this lens is best for any single thing other than being lightweight and compact. Relatively slow and noisy AF. **NOT for video use!!**

Value out of 10: 7

Observations: An easy competitor for my least favorite GFX lens, its "perfectly adequate" however little else. The perfect little 'boring 50mm'.

FUJINON LENS GF 50mm F3.5 R WR

Overall score out of 10: 8

Best used for: Very small & lightweight 40mm "do it all" urban/travel lens. 40mm equivalent 2.8 focal mimics normal human eyes FOV. MOST IDEAL compact "do it all" GFX lens, despite the 45mm 2.8 GF being superior in output in almost every way.

Shortcomings / Not best for: Ideal rendering, saturation, definitive sharpness, portraiture, architecture.

Value out of 10: 10

Observations: BEST VALUE, inexpensive, very fast AF!! Silent! Very compact and perfect for street and travel and generally anything. Like most pancake lenses its desaturated a good bit and renders slightly flat.

FUJINON LENS GF 45mm F2.8 R WR *PERFECT DUAL SCORE & VALUE!* EPIC WINNER LENS OF ALL FORMATS

MICROCONTRAST WINNER FOR TONALITY IN OUTPUT

Overall score out of 10: 10

Best used for: Honestly everything, with a 35mm FOV, its ideal for street, portraiture, and the one lens I could live with glued to one of my GFX cameras.

Shortcomings / Not best for: NONE, however not the best choice for portraiture, but plenty great for doing same.

Value out of 10: 10, This is the **SINGLE MUST BUY GFX lens**. My favorite GFX lens! **NOT for video use!!**

Observations: Absolutely one my favorite lenses of all time period, out of 1000s used and tested, medium format or otherwise.

Incredible microcontrast, bokeh, saturation, rendering is ideal. Fast and silent AF. **An AS PERFECT optical instrument.**

FUJINON LENS GF 23mm F4 R LM WR

Overall score out of 10: 9

Best used for: Architecture, landscapes, interiors

Shortcomings / Not best for: sports, action, wildlife, portraiture. **NOT for video use!!**

Value out of 10: 9

Observations: My third favorite GFX lens! Amazing output, stunningly sharp. **An AS PERFECT optical instrument.**

ADAPTED LENSES RECOMMENDATIONS

ADAPTED LENS PHILOSOPHY & PREMISE OF PURCHASE & USE

Almost the entire reason for the purchase of adapted prime lenses is their unique output, their bokeh, that extra-special rendering. **NOBODY is buying these older lenses because they're sharper, 99% of them are much less sharp, and only 1% of them are AS SHARP as current Fujifilm lenses.** Don't get me started on adapted zoom lenses, the answer is no, and no squared. No way no how should they be considered. As you can see below there are some amazing examples of creamy, dreamy bokeh, soap bubble bokeh, & onion ring bokeh (such as the 500mm f8 Nikkor!). Old Meyer Optik lenses & more.

Many of these lenses are radioactive, and not just slightly so, but some of them will make my Geiger counters scream. My Geiger counter doesn't even register Alpha radiation, only Beta and Gamma. Interestingly enough (pause for drama) ...the most radioactive lenses are older Fujinon (Fujifilm) lenses! Most all of the older Pentax Takumar lenses are radioactive. This radioactivity is Thorium doped glass, it's not a coating at all, but actually in the glass mixture. None of the Russian lenses are radioactive by the way.



RUSSIAN LENS WARNING!

Russians absolutely love to pack their Helios lens focusing coil (all Russian lenses in fact, not just the Helios) with lots of snotty grease, so much so, it oozes like a lava out of the back of the lens. I don't list any Helios lens below as a recommendation, but be warned, if you don't remove ALL the excess grease from the back of your Russian lenses, a glob can fall on your sensor and can destroy your shutter mechanism, not to mention taking forever to get off the sensor. It only takes a smear of grease to grease the focusing coil, but the Russians love to pack theirs with grease as if it was a car's transmission gear box!

HOW TO JUDGE A USED LENS FOR PURCHASE

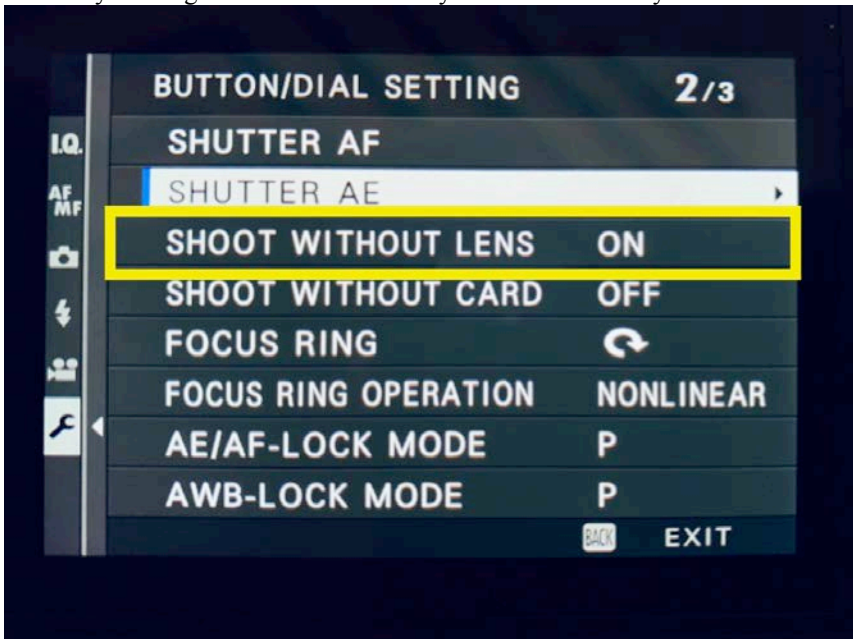
This is the simple and easy method to judge a used lens. Unfortunately 99% of everyone selling older lenses on Ebay is as clueless as a sack of rocks on how to grade one before selling it, "ok, its excellent condition!" and it turns out to be full of haze or fungus.

NEVER buy a lens with haze, ever! Haze looks like finely powdered salt inside the lens, shine a light from the rear of the lens to the front and look inside. Haze is atomized grease and or oil from the helicoil of the lens, which basically means a corkscrew that two barrels of the lens screw thru each other and which contains grease. This happens when fools store these older lenses over the years etc. in HOT PLACES, the grease gets atomized and rests as micro spots on the interior elements. When you shoot anything with ANY bright light at all, this haze scatters the light and all the images will look like you were shooting thru a milky filter.

The other issue is fungus, again this is due to fools storing lenses in damn and or hot places. Fungus looks like a spidery web creeping out, its usually around the corners of the lens. You can kill the fungus off with UV, but if MORE than 10% or so of the lens contains fungus, return it or don't buy it. I have several lenses with fungus and it never appears in the image, it doesn't bother me a bit. Killing fungus however does NOT remove it, it just kills it.

SHOOTING WITHOUT LENS MENU OPTION, TURN ON

This feature should be called **“USE ADAPTED MF LENS”**, but oh well! You need to turn this ON in order to use your adapted lens, and everyone forgets this fact & then they email me as to why their camera wont fire. The factory default is OFF.



MEYER OPTIK TRIOPLAN 100mm 2.8



MITAKON 35mm f0.95





ADAPTED LENSES

Below I would like to list some easy to find and cheap (in most cases) adapted lenses that are wonderful to use on your Fujifilm camera. I can promise you there is nobody else out there that has tried more adapted glass on the Fujifilm X and GF mount that I have! Also too I have been “hoarding” (is that the right word?!) awesome cheap M42 lenses for many years and tried so many of them! I’d like for you to be happy and not waste tons of time and money like I have. I hunt for some of these lenses on Ebay, however the best place to find them is UsedPhotoPro (Roberts Camera) in Indiana, who also sells on Ebay, they buy used gear buy the tonnage.

If you want lots of image examples of these lenses below, go to their respective FLICKR pages, you will find plenty of examples.

PHILOSOPHY: MODERN-OPTICS GOLDEN-RULE FOR THOSE WHO DO NOT UNDERSTAND

You can (re)design a prime lens to ‘dial’ out most all of the chromatic aberration, potential flare, distortion, and likewise increase its corner to corner resolving power by adding many more corrective lens elements. However in so doing it is absolutely necessary to wreak havoc upon the divine characteristics of the native simplex prime lens and greatly destroy much of its depth, bandwidth, saturation, & microcontrast (image fidelity) so vital for B&W photography, & likewise its collective multiplicative excellent properties, in order to render incredible true images with both pleasing contrast, & much more.

What you are then left with in this “improved design” of a modern lens, is a prime lens with the same negative attributes and trade-offs of as a zoom lens whose range covers the same F.O.V. as the newly designed prime lens. This then therefore becomes a useless prime lens with all of the disadvantages of a zoom lens’ rendering and none of the remarkable advantages that make an exquisite prime lens between 35mm and 600+mm which is so desirable & the reason why people pay excessive amounts of money to acquire the most perfect prime focal length glass.

An overdesigned prime lens is literally the deconstruction of the very definition (of the advantages) of a prime lens. All lens design is a compromise; no exception to this rule exists. You cannot have extreme mobility (speed) & safety at the same time, for example, someone locked in a bunker and entirely safe with no mobility, or someone entirely mobile but at risk in lack of safety.

Ignorantly, the unknowing prime lens buyers suffer the delusion that prime lenses exist to be used, desired after, & designed exclusively for their faster apertures to compose shots with shallower depths of field. That is indeed one positive primary attribute to owning a prime lens, however the fundamental premise of a prime lens is mostly based in far superior preferential rendering of the image captured, in both depth, inter-tonal details (microcontrast / image fidelity), saturation and more.

Overdesigned & heavily damaged-rendering modern prime lenses (35mm to 200mm ...the range within which only destruction is occurring) exist and are made manifest from lens mfg. at the bequest & bemoaning of non-photography and ever-measuring hobbyists who know nothing of the value of an exquisite image, but only the anguish of MTF charts and other empirical attributes measurable in lenses.

ONLY 3 THINGS IN PRIME LENS DESIGN HAVE IMPROVED IN THE PAST 50 YEARS:

- 1. Wide-angle lens resolution & distortion improvements.**
- 2. Autofocus speed tracking motors / design.**
- 3. In-lens image stabilization.**

Numbers #2 and #3 cannot & do not affect image output on any lens.

FUJIFILM “DUMB” ADAPTERS RECOMMENDED FOR X MOUNT (AND GF MOUNT ALSO) LENS ADAPTION

These are from left to right, a Nikon F to Fuji X adapter for using non-AI, AI, AIS, D lenses with an aperture ring on the lens. In the middle is a Nikon G adapter that lets you use any and all Nikkor lenses made and has an aperture ring for opening and closing the lens aperture. On the far right is a M42 screw mount to Fuji X adapter for using old cheap but great M42 lenses on your Fujifilm camera. These are K&F adapters you can find them on Ebay or on their website: <https://www.kentfaith.com>. I have no connection to this company. They average around \$24 each.



FAVORITE ADAPTED LENSES Part 1

Listed from left to right:

Voigtlander 50mm f1.2 Nokton

Leica M mount lens. Easily the best 50mm lens ever made, but very expensive! Very compact, but possibly my favorite adapted lens.

Voigtlander 58mm f1.4 Nokton

Based on an old Topcon design, this lens has incredible bokeh, used is very cheap (about \$400+) and is a killer lens for everything especially portraiture on a DX sensor.

Voigtlander 40mm f1.2

Very expensive, very fast Leica M mount lens. An incredible lens adapted. Very compact and sharp!



FAVORITE ADAPTED LENSES Part 2

Listed from left to right, starting at the top:

Mitakon 35mm f0.95 Fujifilm X mount

Modern lens, incredible in almost every way, amazing creamy bokeh, everyone should own one!

Nikkor 105mm f1.8 AIS

Absolutely my FAVORITE adapted Nikkor lens to Fujifilm X mount. Incredible image fidelity and bokeh!

Nikkor 55mm f1.2 AIS

Amazing super-fast older but sharp Nikkor. Not cheap in great condition used but rendering is magical. Wonderful lens!

Yashica M42 5cm (50mm) f2

Ultra tiny lens, amazingly sharp, incredible bokeh, POCKET DYNAMITE!! If you find one BUY IT!

PC Nikkor 28mm (shift lens) f3.5

Insanely sharp, amazing SHIFT LENS for use with adapter for architecture and landscape panoramas!



FAVORITE ADAPTED LENSES Part 3

PORST Color Reflex 55mm f1.4

OMG, If you ever find this lens buy it period. MASTER OF ALL TITANIC BOKEH, truly an art lens to cherish and never let go of!

Meyer Optik TRIOPLAN 100mm f2.8

Bubble bokeh famous lens, not sharp, only 3 elements! Takes a day and some skill to learn how to use correctly

Meyer Optik TRIOPLAN 50mm f2.9

Monster bokeh incredible lens. Just amazing!

Meyer Optik PRIMOPLAN 58mm f1.9

Much the same as the TRIOPLAN 50mm 2.9 but with more subtle bokeh



FAVORITE ADAPTED LENSES Part 4

Jupiter 85mm f1.5 (both top and bottom left lenses are the same)

Crazy swirly bokeh from hell (in a good way). Not sharp, you need to learn how to use the bokeh on this lens, but you can do some amazing things with it! Its huge as a tank and weighs just as much

TELEMEGOR 180mm f5.5

The mother of all monster bokeh, this long slim lens is just used for one thing, crazy bokeh, just crazy!



FAVORITE ADAPTED LENSES Part 5

NIKKOR 500mm f8 mirror lens. The last version with orange ring

Wow, I have 2 of these, and they're amazing by themselves but tough as heck to hand hold and tougher to focus on the Nikon they were designed for however on a X-H1 they're amazing! Onion ring bokeh, oh yes! With IBIS and focus peaking these very lightweight lenses are incredible!

MITAKON 85mm f1.2

Incredibly huge and heavy. Relatively inexpensive, sharp, and nearly impossible to focus on the mount for which it was designed (Nikon or Canon), however perfect with peaking on any Fujifilm camera. Cotton candy bokeh.



B-LIST FAVORITE ADAPTED LENSES

Listed from left to right:

Meyer Optik Primoplan 58mm f1.9

Amazing bokeh lens.

Auto Rikenon 55mm f1.4

A must buy lens, incredible bokeh, usually very cheap. Very radioactive however

Auto Sears 55mm f1.4 (exact same lens as Auto Rikenon under a different name)



B-LIST FAVORITE ADAPTED LENSES

Listed from left to right:

Note large silver aperture knob: Auto Takumar 5cm (50mm) f2

If you find this lens BUY IT, PERIOD, tiny, sharp as hell, amazing bokeh!

Note large silver aperture knob: Yashinon 5cm (50mm) f2

Same as above! If you find this lens BUY IT, PERIOD, tiny, sharp as hell, amazing bokeh!

Zeiss Biotar 58mm f2

This is what most people think the Helios is a “copy of”, but its not, this is the REAL DEAL lens, the original and not Russian junk like the Helios is.

Russian INDUSTAR 50mm f3.5

\$20 all day long, tiny tiny tiny!!!! Uncoated Russian lens that’s a total pile of “isn’t that too cute and cool”! Great bokeh, loads of fun!



B-LIST FAVORITE ADAPTED LENSES

Listed from left to right:

Pentacon 50mm f1.8

This is the DEFACTO MUST BUY CHEAP Super-bokeh lens. Everyone should buy it, period. \$50 and you can have so much fun with it.

Oreston (exact same lens as the Pentacon) 50mm f1.8

Exact same lens as the Pentacon

Zeiss Tessar 50mm f2.8 (or 3.5)

Super tiny amazing mfg. old school true German perfection. Not sharp, great bokeh.

Meyer Optik Primotar 50mm f3.5

Hard to find, incredible bokeh, small, amazing lens.



B-LIST FAVORITE ADAPTED LENSES

Listed from left to right:

Takumar 55mm f1.8

Radioactive lens, amazing bokeh!! So very cheap, a must own lens.

Auto Yashinon 50mm f1.7

Incredible bokeh, often cheap and easy to find.

Takumar 200mm f3.5

A huge lens with a killer aperture assy. Great bokeh, a true cheap telephoto art lens.



B-LIST FAVORITE ADAPTED LENSES

Listed from left to right:

Takumar 50mm f1.4

Very radioactive lens. Everyone should own one of these, they're cheap, and incredible!

Schneider Kreuznach 135mm f3.5

Rare to find one, very sharp, moderate bokeh.

Takumar 135mm f3.5 "silver ringed barrel version (older)"

Incredibly sharp, great bokeh, and incredible build quality.



B-LIST FAVORITE ADAPTED LENSES

Listed from left to right:

Takumar 135mm f3.5

Little brother to the 2.5, very sharp, with soft cotton candy bokeh

Takumar 135mm f2.5

Same as the 3.5, also very sharp with the same bokeh

Russian Jupiter 135mm f3.5

Cheap and easy to find, good build quality, amazing bokeh



SOME INCREDIBLE NIKKOR F MOUNT LENSES THAT WORK AMAZING ON A FUJIFILM CAMERA

[Voigtlander 28mm f2.8](#)

Hard to find but incredible adapted lens to Fujifilm X mount

[Voigtlander 20mm f2.8](#)

Hard to find but incredible adapted lens to Fujifilm X mount

[NIKKOR 200mm f4 AIS](#)

Great cheap adapted telephoto lens

[NIKKOR 135mm f3.5](#)

Small and wonderful adapted telephoto lens

[NIKKOR 100mm E series f2.8](#)

Also hard to find, but very lightweight and amazing adapted lens

[Nikkor “pancake” 50mm f1.8](#)

\$40, small, incredible, amazing bokeh!



FUJIFILM GFX TIPS & TRICKS

MEDIUM FORMAT SHUTTER TIME IS LONGER & HAS MORE SHAKE & WHY

Most everyone would assume, for example, $1/60^{\text{th}}$ of a second on a DX camera is no different than $1/60^{\text{th}}$ of a second on a GFX, and that is NOT the case. Exposure time is NOT the same as the time required to make that $1/60^{\text{th}}$ of a second exposure time. The time required for the shutter curtains, both of them to complete the circuit to make that time is longer even though the sensor exposure is the same time as that of an X series DX camera.

This is where “medium format shake” becomes an issue, and also why shooting, in ambient lighting compositions, electronic first curtain and ES becomes so helpful. All shooters of medium format for the first time realize that GFX (any medium format) are more susceptible to lower shutter speed shake issues, and this is the reason why.

THE GFX EXTENSION TUBE

The MCEX-18G WR extension is worth buying for using on the 32-64 alone, you can get so very close and the 32-64 becomes almost like a great macro lens. I do not recommend the larger extension tube however, see this chart below on the parameters of this extension tube.

https://www.fujifilm.com/products/digital_cameras/accessories/pdf/mcex_02.pdf



WHICH EXTENSION TUBE? NOT THE 45G

The same reason 1.4X teleconverters are “great” and 2X teleconverters are usually BAD is the same premise for extension tubes. I cannot recommend the 45G tube for any lens at all, rather the MCEX-18G and its best use is with that of the GF 45-100mm

Magnification of the macro extension tube

The shooting distance and shooting magnification change according to the position of the focus ring.

The following table shows reference values for when the focus ring is on the nearest side.

If the surroundings are blurred, please use the narrow aperture.

		Lens Only			MCEX-18G Mounted			MCEX-45G Mounted			
		Max Magnification	Working distance(mm)	Shortest shooting distance(mm)	Max Magnification	Working distance(mm)	Shortest shooting distance(mm)	Max Magnification	Working distance(mm)	Shortest shooting distance(mm)	
Prime	GF23mmF4 R LM WR	0.09	249	380	0.85	11	160	1.13	40	201	
	GF45mmF2.8 R WR	0.14	334	450	0.53	85	219	1.08	67	188	
	GF50mmF3.5 R LM WR	0.10	475	550	0.49	118	212	0.88	105	249	
	GF63mmF2.8 R WR	0.17	401	500	0.46	172	288	0.59	274	473	
	GF110mmF2 R LM WR	0.16	747	900	0.33	411	582	1.04	187	412	
	GF120mmF4 R LM OIS WR Macro	0.50	273	454	0.71	223	422	0.44	607	973	
	GF250mmF4 R LM OIS WR	0.22	1,169	1,400	0.31	897	1,147	0.44	607	973	
Zoom	GF32-64mmF4 R LM WR	Wide	0.08	356	500	0.66	27	189	1.52	0	189
		Tele	0.12	427	600	0.44	90	281	0.91	22	240
	GF45-100mmF4 R LM OIS WR	Wide	0.08	473	645	0.51	60	250	1.16	14	231
		Tele	0.13	615	816	0.34	209	428	0.67	92	338
	GF100-200mmFS.6 R LM OIS WR	Wide	0.20	390	600	0.43	183	412	0.77	102	358
		Tele	0.12	1,390	1,600	0.24	743	971	0.92	475	731

Working Distance: Distance from the top of the lens barrel to the subject

Shortest shooting distance: Distance from the image sensor to the subject

Shooting inability area

MEDIUM FORMAT GFX SENSOR SIZE

As has always been the case, and to quote from Hasselblad: *“In photography, medium format simply refers to a camera that has a larger sensor than a 35mm (24x36mm), or full frame DSLR camera.”*

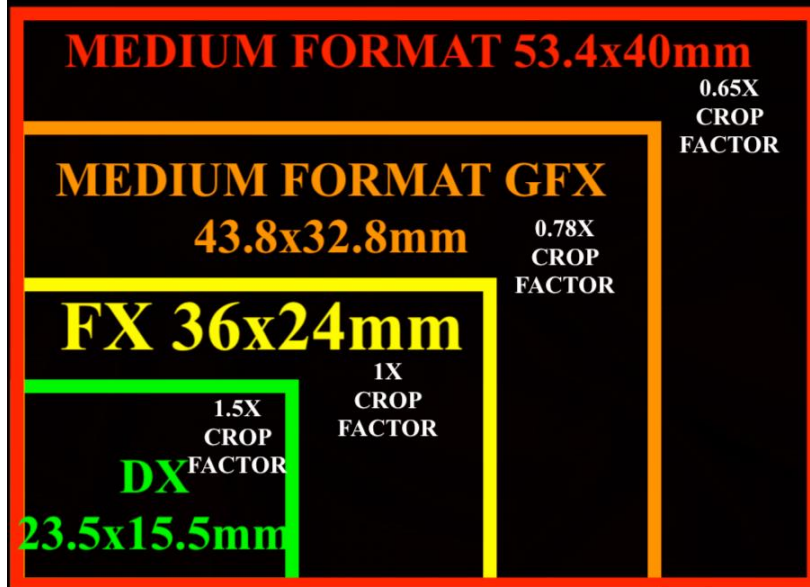
Much nonsense on the internet will say the GFX is a “crop medium format”, or mini-Medium format, or “not true medium format”, well I can tell you all opinions aside, this is rubbish and nonsense. Nobody in the days of film called 645 “mini MF” relative to 6x7 or otherwise, and none of these nonsensical statements apply today. The defacto definition of medium format is ANY SENSOR (or film) LARGER THAN FX, or 35mm. Period, end of story.

The sensors used in all GFX cameras is a type 3.4 and is the perfect “Goldilocks zone”, which **does NOT have limitations of its larger 4.2 cousin. Those limitations being:**

1. Astronomically more expensive glass, camera, sensor and ultimately total cost.
2. Being limited almost 100% entirely for studio use only
3. Incredibly slower autofocus due to huge driven elements
4. Near total 100% impracticality for everything but studio, product, and commercial work.

MOST DIGITAL SENSOR SIZES

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TYPE 4.2 SENSOR

TYPE 3.4 SENSOR

1.68X OR 68% LARGER THAN FX
ALL GF-MOUNT FUJIFILM CAMERAS

FULL FRAME SENSOR

APSC SENSOR

ALL X-MOUNT FUJIFILM CAMERAS

MOST USEFUL GFX LENS & COMBO

I own all GF lenses and now that the 45-100mm is out, I can easily say that this 35-80mm (essentially) equivalent lens is the most useful, and with the MCEX-18G WR its all the more so! The MCEX-18G WR is not all that wonderful or desirable on any of the GF lenses but on the 45-100mm its literally a dream of ease and usefulness!



ALL GFX CAMERAS TRICK

Because of the LARGE opening on ALL GFX camera mounts, it becomes very easy to accidentally “stab” the sensor (rather the cover glass, but nevertheless, still not good!) with the body cap. I myself have accidentally done it once and nearly so countless times, this is because once UNMOUNTED just before removing it, the thin edge of the cap lends itself to tilting inwards to the sensor. I have gotten around this completely by placing a Velcro strip on the body can and using another Velcro mini-strap with a LOOP around the middle of the cap, so then when I unmount the body cap, I can pull it out and away using this loop. X-mount cameras cannot incur this issue because there is no way in which the cap can touch the level of the sensor, but the GFX cap can reach it.



GFX100 TRICKS & TIPS



GFX100 TRICKS & TIPS VIDEOS

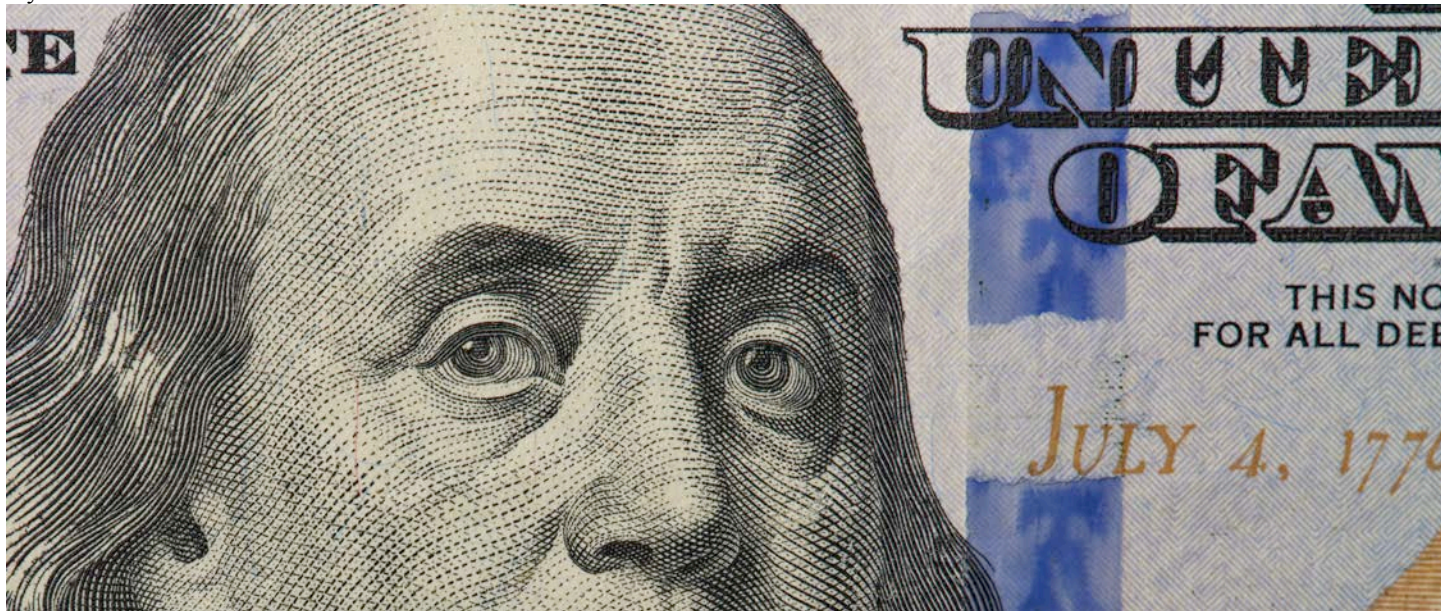
<https://www.youtube.com/watch?v=HZVICtyC1GI>

<https://www.youtube.com/watch?v=S-yPgdkuMnA>

Check out these GFX100 tricks and tips videos above to help orientate yourself to the GFX100 camera system and its particular eccentricities

GFX100 HAS SO MUCH DETAIL, YOU'LL THINK YOU SLIPPED INTO THE FUTURE

This is just a handheld macro shot with the GFX100 and 120mm macro GF lens. I love the GFX100 so much! Sorry, I can't help myself!



GFX100 TOUCH SETTING FOR SWIPE-FUNCTION USE

When you setup your GFX100 function button customization and the 4 (up, down, left, and right) swipe functions, the swipe functions will not work when you exit the function setup screen UNTIL you go into your touch screen settings and turn ON the touch functionality which is default set to off.



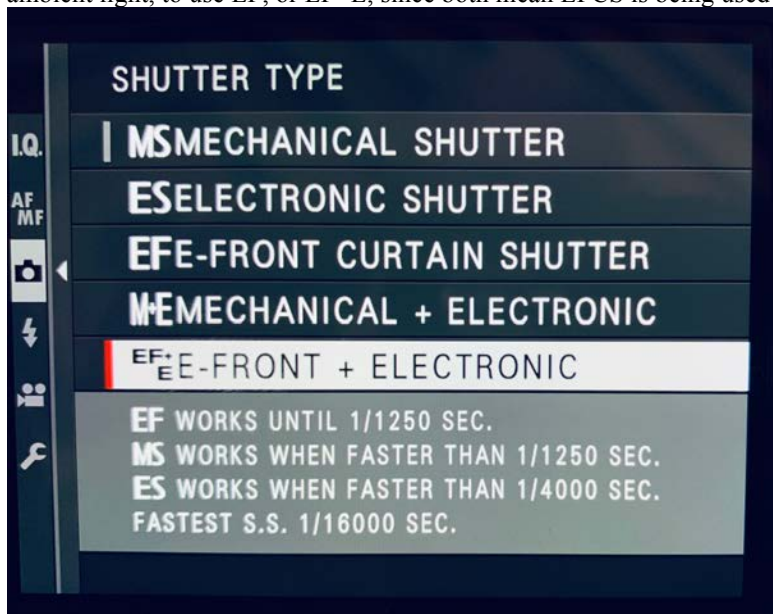
GFX100 EXPOSURE COMPENSATION

You can setup your exposure compensation (default to rear command dial) such that you have to press the button for exposure compensation while turning the dial (default), or as I prefer, to turn it always on or off, since I never accidentally turn my rear command dial.



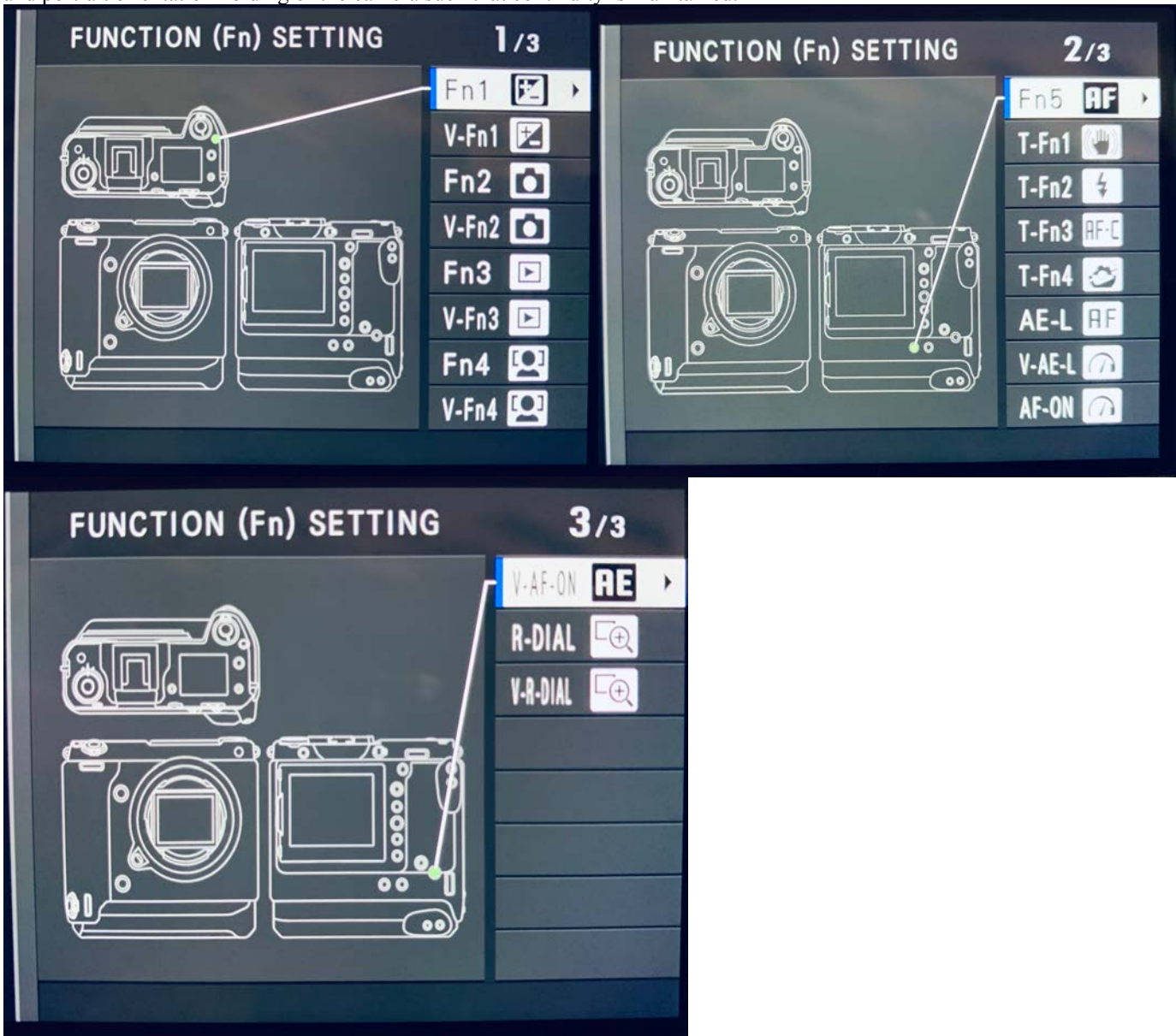
GFX100 SHUTTER SETTING & EFCS (ELECTRONIC FRONT CURTAIN SHUTTER)

When shooting with IBIS on the GFX100 in slow shutter speeds at 1/60th and slower, while the IBIS mechanism on the GFX100 is amazing, you will have far superior results for none or almost never having image shake if you are shooting NO FLASH (because EFCS has bokeh and flash artifacts that crop up) AMBIENT photography. Just remember in LOW LIGHT slow shutter speeds with ambient light, to use EF, or EF+E, since both mean EFCS is being used at slower shutter speeds.



GFX100 CUSTOM FUNCTION BUTTON AND TOUCH-FUNCTION SETTINGS

Here are the settings I find best work for me as the custom function button and touch-function settings on my GFX100 medium format camera. You will notice there are several sets of identical functions set, and these are mutual corresponding buttons for both landscape and portrait orientation holding of the camera such that continuity is maintained.



GFX100 CUSTOM CASE & INSURANCE!

The best camera case on earth serves no good if it all gets stolen or dropped. The VERY FIRST THING you should do when you get your GFX100 is contact your insurance agent to get a personal articles policy (inland marine insurance) for your camera, for loss, drops, theft, accidents etc. Secondly as you can see below get yourself a nice case to store it in for transport, and frankly a soft case is not the answer. A Pelican case is “best” (get them used on Ebay cheap!) but I went with an all aluminum “old” Zero Halliburton case with pluck foam to hold the viewfinder and spare batteries and charger.



GFX100 CUSTOM REAR SUB MONITOR SETTINGS (the back bottom display)

Lets call it what humans call it, the back bottom display! You have multiple options for customizing the back bottom display, 2 information displays, the 2nd of which has smaller windows but displays more information, an exposure compensation scale, and a monochrome histogram display. Customize information 1 to suit you, this is how I have mine setup.



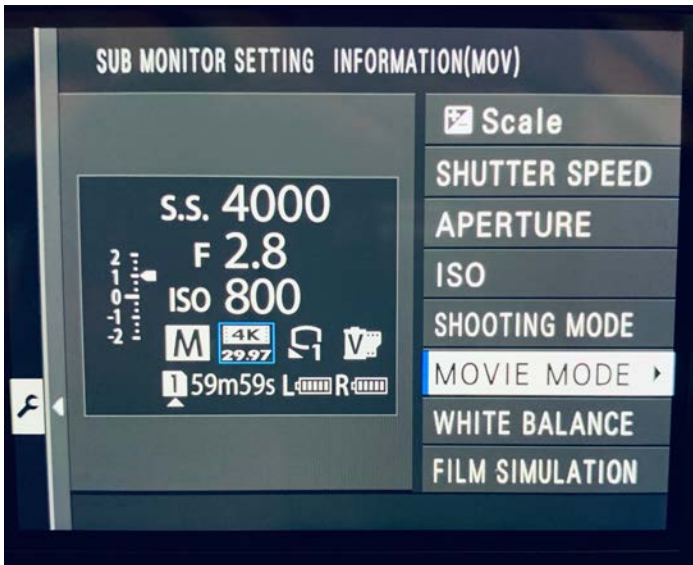
GFX100 CUSTOM SUB MONITOR SETTINGS (the top display)

Lets call it what humans call it, the top display! You can mix and match the information on your top display as you see fit and after setting your custom function buttons, it would be the next thing I recommend you set, then your Q menu settings.



GFX100 CUSTOM SUB MONITOR SETTINGS FOR MOVIE RECORDING (the top display)

Lets call it what humans call it, the top display!



THE MEDIUM FORMAT DIFFERENCE

Oddly enough, everyone out there (and everyone on youtube) has never defined what the “medium format” look is. Suffice to say it is not merely a lot more megapixels but actually being optically much closer with the same field of view of a wider lens on a FX camera.

THE MEDIUM FORMAT DIFFERENCE IN 5 POINTS

1. Much closer with a wider field of view from identical distances between camera & subject. **110mm GFX = 85mm FX**
2. Superior aspect ratio. **4:3 (GFX) compared to FX (3:2)**
3. More megapixels,.....or same megapixels with larger photosites over larger area
4. Larger photosites (bigger “eyeballs” for superior DR).
5. Less image enlargement to make identical “X” sized prints.

Which is superior?? 50MP on a FX sensor or 50MP on a GFX sensor? ... 50MP on a GFX sensor due to:

- 1. Sensor area***
- 2. Photosite/pixel size (“larger eyeballs”)***



GFX LENSES FOR WHAT USE

FUJINON LENS GF 32-64mm F4 R LM WR

General purpose, portraiture, street, travel, landscapes, interiors

FUJINON LENS GF 45-100mm F4 R LM OIS WR

Best/ Ideal for: Street, Travel, MACRO with MCEX-18G extension tube, Portraiture, Tele-landscape

FUJINON LENS GF 100-200mm F5.6 R LM OIS WR

Sports, action, wildlife, street, telephoto landscapes

FUJINON LENS GF 250mm F4 R LM OIS WR

Sports, action, wildlife, telephoto landscapes

FUJINON LENS GF 120mm F4 R LM OIS WR Macro

Macro, telephoto landscapes

FUJINON LENS GF 110mm F2 R LM WR

Portraiture, telephoto landscapes

FUJINON LENS GF 63mm F2.8 R W

Street, portraiture, general

FUJINON LENS GF 50mm F3.5 R WR

Best/ Ideal for: Street, Urban, Travel

FUJINON LENS GF 45mm F2.8 R WR

As a 35mm equivalent, honestly for everything, but street, travel, portraiture and so much more

FUJINON LENS GF 23mm F4 R LM WR

Landscapes, architecture, interiors

EXTENDED ISO SETTINGS

You cannot use the extended ISO (upper and lower) settings unless your shutter is in either **MECHANICAL or EFCS**. Extended ISO is not possible in ES for example.

FUJIFILM EVF-TL1 TILT ADAPTER

It's utterly unthinkable to own a GFX50s and not also own the **EVF-TL1 tilt adapter**. Yes, it is rather expensive at \$560 however it's an invaluable purchase. The tilt and swing function for the viewfinder make tripod shooting and vertical portraiture so easy and wonderful!



THE GFX DUO LENS SETS FOR TRAVEL & PORTRAITURE

This of course is subjective to some degree, but regardless of the GFX camera you own or use, my pick for the GFX portraiture DUO of lenses is: **45mm f2.8 & 110mm f2**. Likewise my pick for the travel DUO is the **45mm f2.8 and most certainly the 100-200mm**. A very strong case can be made that the travel duo is the 32-64mm and the 100-200mm. Either way!

THE GFX DIY RING FLASH FOR PORTRAITURE!

This is an incredible DIY light mod. I'm using a surplus 4" fiber optic (used for microscopes) ring light (Ebay), and using the plastic diffuser cap from the Fujifilm speedlight with a big hole drilled out for inserting the one end in. Likewise Velcro strips hold this onto the speedlight which sits in the hot shoe. On the other end, I'm using a metal lens hood for the 110mm GFX (made for a Nikkor) that attaches also via industrial Velcro. This light mod is simple, and incredible! Other than a speedlight, you're talking about a MEDICAL GRADE no moving parts fiber optic ring light! It does not get any better than this!





CABLES FOR TETHERING YOUR GFX (TO YOUR LAPTOP)

You need to study your Capture1 software instructions on tethering (or whichever application you use), I'm not writing a book on "how to software" tricks & tips. Importantly tethering is vitally useful for product photography, some studio portraiture and many other things; especially to show the client rather than looking at the back of the LCD display. I recommend tether tools cables, but make sure you get the right connectors for your camera to your laptop.

<https://www.tethertools.com/product-category/cables-adapters/>

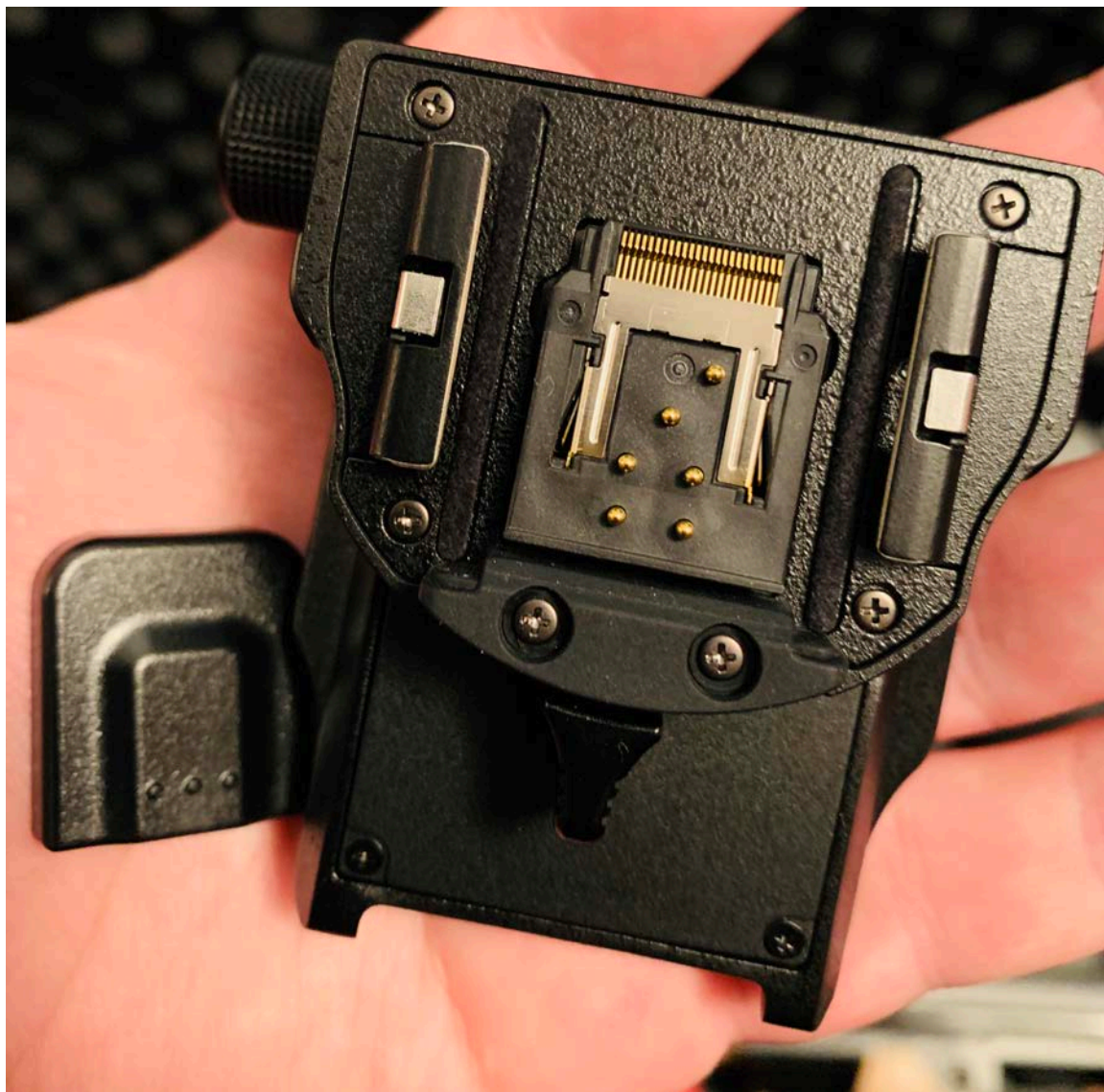
Likewise of great use, so cables don't go yanking and possibly ruining connectors etc., is to get a tethering block, the bottom side unseen in the image below just screws into your cameras tripod screw socket, the cable is snaked threaded thru the slot channels, such that you are locking down the cable from being yanked, or from falling out.

<https://www.tethertools.com/product/tetherblock/>



THE GFX VIEWFINDER & TILT ADAPTER CONTACTS WARNING

The contacts on the bottom of the GFX50s & GFX100 are fragile, **DO NOT TOUCH THEM**, always use the cap seen on the far left when storing or traveling with the viewfinder. The same also applies to the tilt adapter! These contacts feed video from the camera thru to the viewfinder. LIKEWISE these same fragile contacts are found at the front of the hot shoe on both cameras, just out of sight.



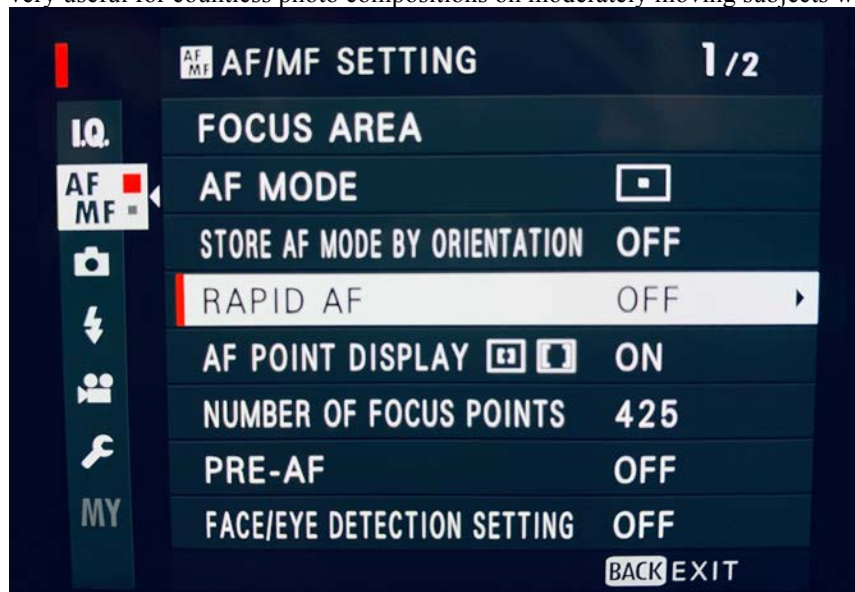
BOTH the GFX50S & GFX50R IMAGE SIZES & ASPECT RATIO

Your GFX50S & GFX50R can shoot in eight different aspect ratios. 1. 4:3 51MP 2. 5:4 48M 3. 7:6 45MP 4. 1:1 (square) 38MP 5. 3:2 45MP 6. 16:9 38MP 7. 65:24 25MP 8. 35mm FORMAT 30.5MP



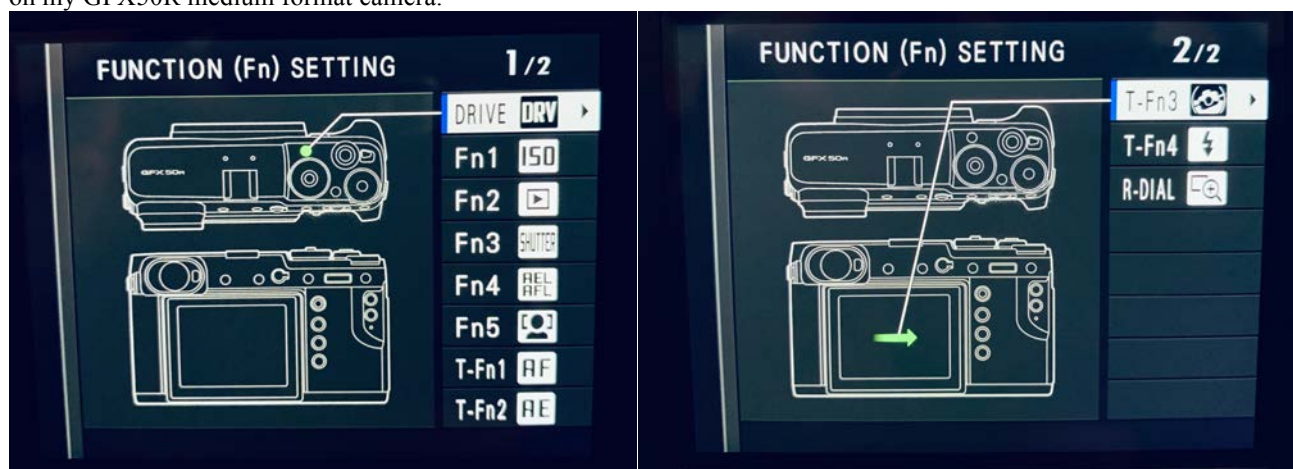
BOTH the GFX50S & GFX50R HAVE A RAPID AF SETTING

While the display quality will drop when in this setting, RAPID AF lends priority to the maximum AF speed possible. This can be very useful for countless photo compositions on moderately moving subjects which may be missed otherwise.



GFX50R CUSTOM FUNCTION BUTTON AND TOUCH-FUNCTION SETTINGS

Since I am always being asked, here are the settings I find best work for me as the custom function button and touch-function settings on my GFX50R medium format camera.



GFX50S CUSTOM TOP DIALS SETTINGS

I shoot aperture priority almost all the time and the rest all manual. As you can see my from custom dial settings below, my ISO dial is set to C (custom) which lets me (I keep the dial locked all the time so it won't accidentally move) press-click the front command dial to then dial in my desired ISO. Likewise you can see my shutter dial is set to A (automatic) since I choose my aperture as I see fit on the fly.



VERY USEFUL COMMAND SETTINGS FOR YOUR GFX LENSES ON THE GFX50S

This works as well on the GFX50R, however in a different manner due to the command dials. On the GFX50S setting your lens to C (command) on the aperture ring lets you press to click on the front command dial which alternates between ISO (if you also have that set to C!) and APERTURE. When highlighted you can then roll the front command dial to the aperture you wish, this also prevents you from accidentally changing the aperture since while in C, it will remain locked until you press in the (see image below) the locking button on the aperture ring.



GFX50S CUSTOM SETTINGS FOR THE TOP SUB-MONITOR (TOP DISPLAY)

Don't forget to go into your settings on your GFX50s for display settings to customize what IS and what is NOT shown as you see fit. My custom display settings are shown below as I like to see them! Choose what is important for you. There is also likewise, in video mode, a completely different set of customizable display settings your can set as you see fit. If you have a vertical grip attached with a second battery this will also be displayed EVEN WHEN THE CAMERA IS OFF, which is very handy!



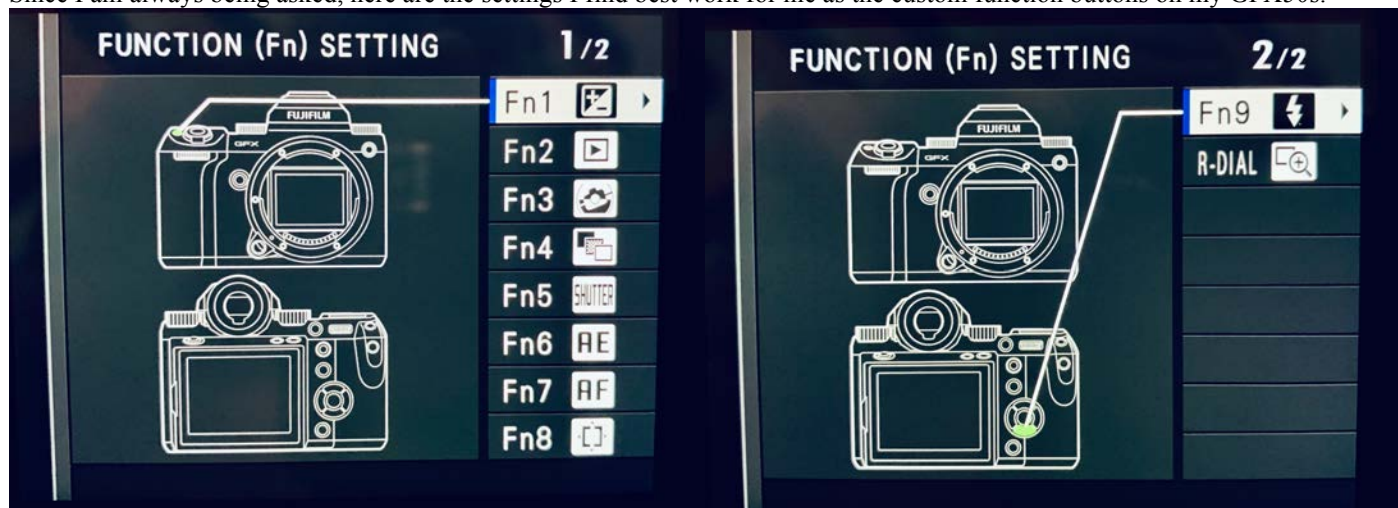
GFX50S CUSTOM EXPOSURE COMPENSATION

Your GFX50S has a customized option for the exposure compensation button that you choose either to HOLD and adjust only, or to toggle ON and OFF the rear command dial for adjusting the exposure compensation.



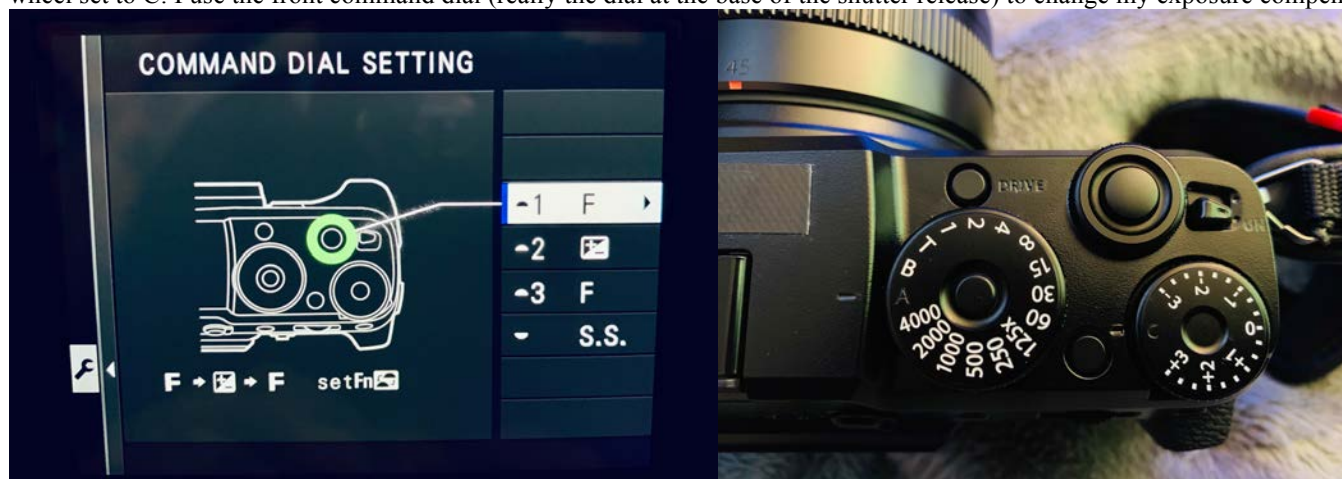
GFX50S CUSTOM FUNCTION BUTTON SETTINGS

Since I am always being asked, here are the settings I find best work for me as the custom function buttons on my GFX50s.



GFX50R CUSTOM SETTINGS FOR FASTEST CHANGES

Other than all manual and TTL for flash photography I shoot aperture priority and with the settings below the exposure compensation wheel set to C. I use the front command dial (really the dial at the base of the shutter release) to change my exposure compensation.



THOSE HORRIBLE MEDIUM FORMAT LUGS!

Fujifilm has heard the outcry on these awful throwback medium format lugs which greatly hinder the use of normal camera straps and these will not be going onto the GFX100 thankfully. However using my 2 point hand strap as shown below it makes the GFX50s with vertical grip very comfortable and lets you use the Fujifilm strap in the best position, which is side saddle carry (see below tip).



SIDESADDLE GFX50s STRAP CARRY

If you make and attach a 2-point hand strap (see above tip) the most wonderful and comfortable carry strap option is sidesaddle with strap attached to the left lug, and the right side attached to the pass-thru loop of the hand strap on the bottom. See image below.



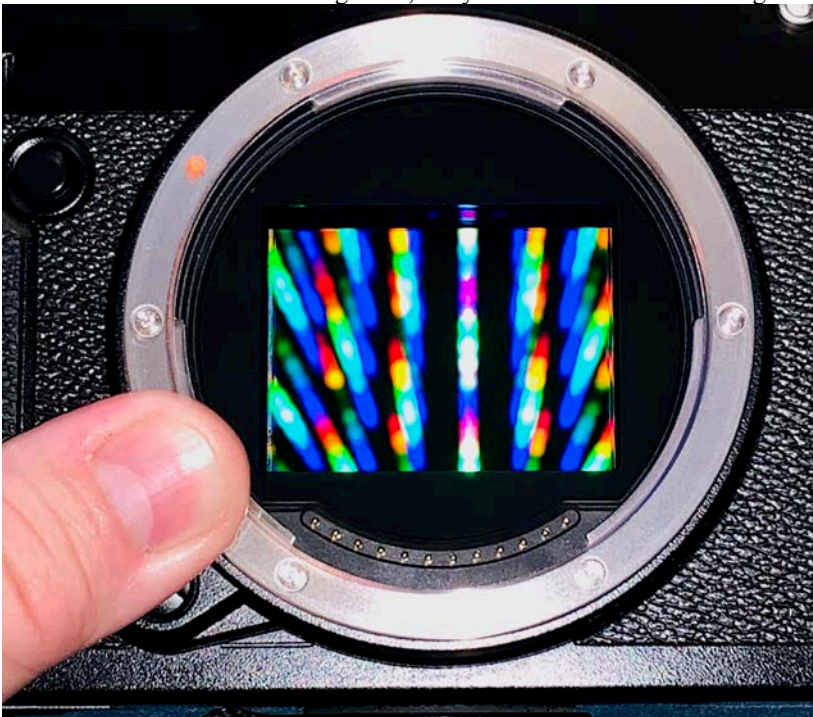
MAKE YOUR OWN REUSABLE GFX SENSOR CLEANING PADDLE

I got this tip from the guru of sensor cleaning companies and the boss of same, however he made me promise not to disclose names. Take two old FX or DX sensor cleaning paddle, and then make a PERFECT cut-to-width of the sensor, an old gift card or credit card. Then using very light sandpaper, file off the hard edge that will make contact with the sensor cover glass. Use superglue to glue this paddle between the two used paddles with their fabric removed, see image below (let fully dry overnight). Then take a PEC PAD and wrap it over the paddle, make SURE NOT TO TOUCH the fabric that will contact the sensor glass!!... then to keep it in place, tape it at the base with a twist in the cloth, or use a rubber band. There you go, instant GFX sensor cleaning device and also reusable.



EEEEK!! THAT MOUNT IS BIG AND IT'S FAR TOO EASY TO "REACH" INSIDE

Careful when putting on or off lenses or caps, because at an angle you can touch and scrape the cover glass over the sensor! Most of us mount lenses without looking at all, but you need to be careful doing this on the GFX systems!



BUY THE FUJIFILM WRIST STRAP: WRST GB-001 FOR YOUR GFX50R!

While made for the X-T1, this factory Fujifilm wrist strap works perfectly and so comfy on the GFX50R camera! Some people complain that the 50R is “boxy” which is rather well is, but with this strap (\$50) you can pack the camera all day long without any hand stress, and it also is protection against drops.



CONSIDER THE GFX ‘WONDER LENS’, THE NIKKOR 10.5mm FISHEYE!

The Nikkor 10.5mm (a DX lens) fisheye can be bought used for about \$350, and when you cut (its plastic) off the built in lens hood, you get a TRUE circular fisheye with 220 degrees of view! There is NO CAMERA this will work on for a true circular image BUT a medium format camera! NO NIKON DSLR will do this! It cuts off the top and bottom on a FX camera. This lens is insanely sharp (for a fisheye, its incredible), but careful, you have to lean forward or you’ll shoot your feet in the shot!

This makes for some very neat photo compositions under the right circumstances, the shots are fun and cool, if done right! You will need to put on a Nikkor F to Fujifilm GF adapter of course to mount it to your GFX camera!



TRAVEL WITH YOUR GFX CAMERA

It goes without saying you should NEVER travel with your camera with a lens mounted, countless cameras have been destroyed that way, however further still, since the body cap can and does work its way loose in travel, you can EASILY damage the sensor (really the cover glass, but that's a distinction without a difference). I put Velcro on my body caps, both X series and GFX, and then use a Velcro strap, of which you can buy a bundle of them at hardware stores, and wrap that around the camera so the body cap CANNOT come loose or off.



WORLDS BEST MACRO MOD. MY CREATION

WORKS BETTER THAN ANY MACRO LIGHTING TOOL I HAVE EVER USED, WHICH IS MORE THAN ANYONE ELSE, I HAVE USED AND OWNED THEM ALL.

WHAT YOU WILL NEED

1. VELLO CANON (Fujifilm pinouts are the same as for Canon) TTL cable in 1.5-foot length. You can buy it from B&HPhoto.
2. Speedlight, I prefer the Nissin i60 which is very small but very powerful. This unit is now upcoming to be the official Fujifilm speedlight which will be announced some time in the near future.
3. Plastic “yard sign” board, very thin and flexible, found at most big box hardware stores for making yard signs (for sale, yard sale etc.).
4. Silver ducting tape, which is sticky backed aluminum, available at any hardware store.
5. Flash bar, used in the 70-90s, very cheap used on Ebay, almost nobody uses them anymore
6. Sticky backed applicable Velcro and Velcro strips, cut into 2-3” sections, 4 total, for holding to your speedlight, also from the hardware store.
7. Copper wire, either 10 gauge or 12, or even a coat hanger wire would work.

Here is the VELLO TTL cable you want to purchase. WHY a TTL cable and not the radio trigger this speedlight uses? Because this close radio triggers are NOT reliable, and likewise TTL cables are flawless and dependable and do NOT require batteries!

Vello Off-Camera TTL Flash Cord for Canon Cameras (1.5')

BH #VEOCSC15 • MFR #OCS-C1.5 | ★★★★★ 181 reviews | 12 Questions, 40 Answers



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1

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Order now to ship **Thu Apr 23**

Length

33' 6.5' 1' 1.5' 3' 6'

Compatibility

Canon Nikon Olympus/Panasonic Pentax
Sony/Minolta

Key Features

In the image below see the orientation. The speedlight covers the very close and short range and the top reflector (note the 15 to 20 degree bend) covers both longer and wraparound light for the shorter range. The speedlight is industrial velcro'd to the flash bar which is attached to the camera tripod hole.



In the image below you can see the reflector which has wires (or coat hanger wires) duct-taped to the back so that it can hold its 15 to 20 degree bend. This is roughly 5" wide by 7" long and made from the plastic yard sign board and coated with silver ducting tape on the underside.



In the image below you can see the orientation and positions of all items together. It looks ungainly but actually is not, likewise the speedlight diffuser dome has the bottom 15% blocked off so as not to shoot light back into the lens hood and spoil the image.



WORLDS BEST SPEEDLIGHT DIY MODIFIER. MY CREATION

FOLDS FLAT, WEIGHS NOTHING, CHEAP AND EASY TO MAKE! DURABLE TOO!

WHAT YOU WILL NEED

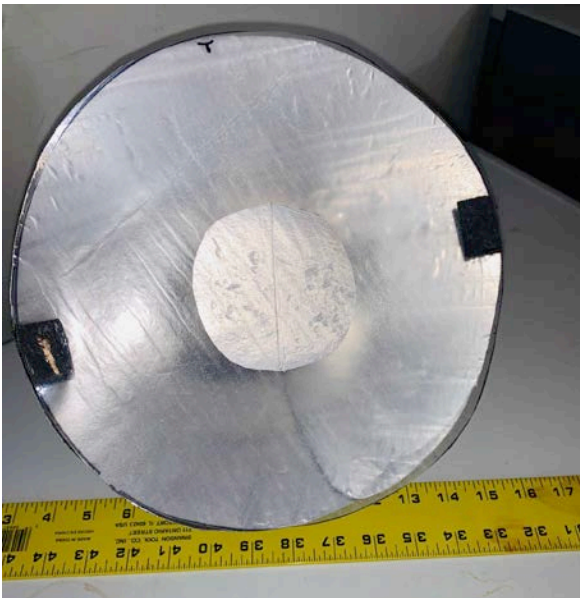
1. Plastic “yard sign” board, very thin and flexible, found at most big box hardware stores for making yard signs (for sale, yard sale etc.).
2. Translucent tracing paper from art store
3. Laminating sheets for laminating the tracing paper OR a laminating machine for doing same
4. Sticky backed applicable Velcro
5. Velcro strips, cut into 2-3” sections, 4 total, for holding to your speedlight, also from the hardware store.
6. Ducting tape, which is basically sticky backed aluminum foil.



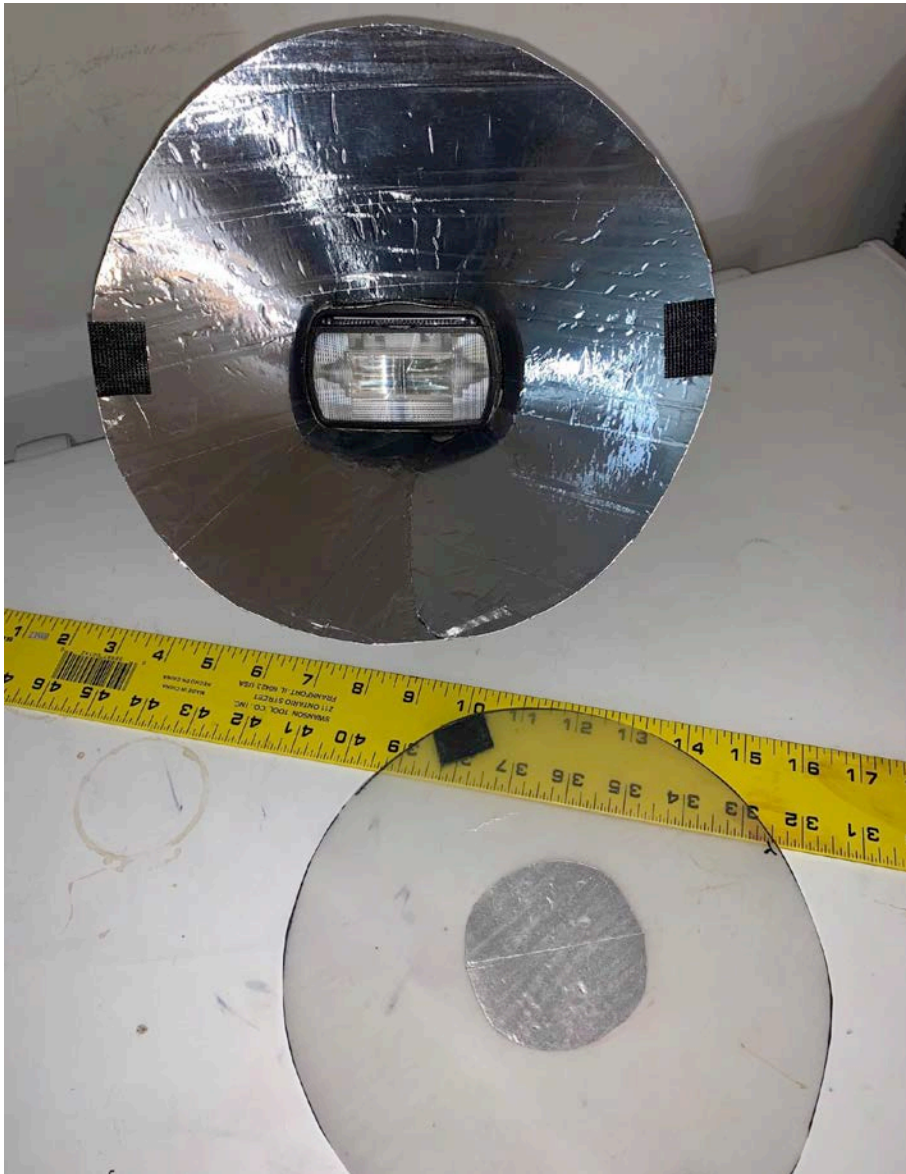
Back view attached to speedlight. Note how and where the Velcro mates to and with the speedlight. Four positions in total



Note that the front of the mod. central reflector and translucent laminated tracing paper and two Velcro spots (4 would be overkill) for mounting to the base of the mod. , i.e. the cone / central reflector.



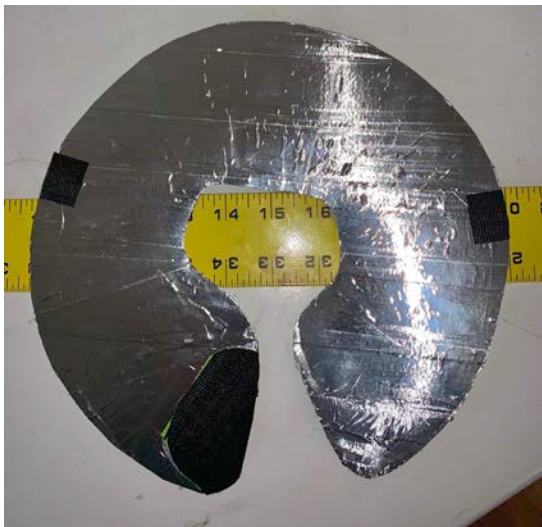
This is the view of the mod. before the attachment of the translucent window is attached.



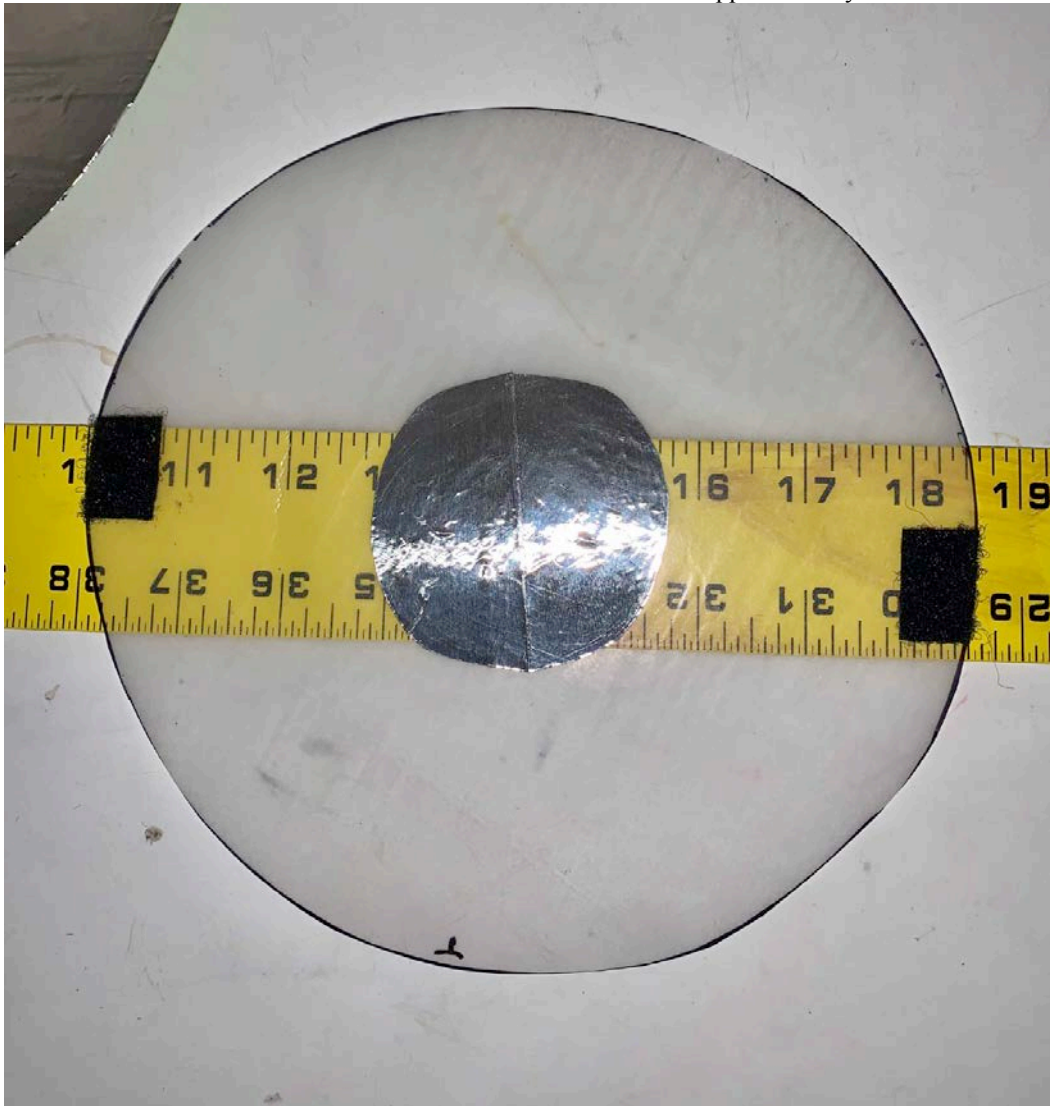
This is the base which is flattened out for your viewing, before attaching to itself. It is 10" wide but note the irregular center cut out, to fit once mated into a cone shape by attaching to the Velcro on the other side. The central odd shape makes a perfect rectangular fit around your rectangular speedlight head. Note the backside Velcro placements.



Note the front side Velcro placements. Coat the entire inside face with the silver ducting tape.



8" wide is the translucent window. The center reflector section is approximately 2.7" wide in diameter and this part faces inwards.



EXCELLENT DIY FLASH MODS!

As you can see below there are many great DIY mods you can make most just require aluminum ducting tape, Velcro, and plastic sheeting and some laminated tracing paper. The first thing everyone learns is that lighting is so important, then they learn that that is insufficient at best and one needs CONTROL, not just lighting. Lighting without control is like shooting without aiming! All mods below create beautiful lighting and I gave them much thought in design to make them cheap, simple, and effective.



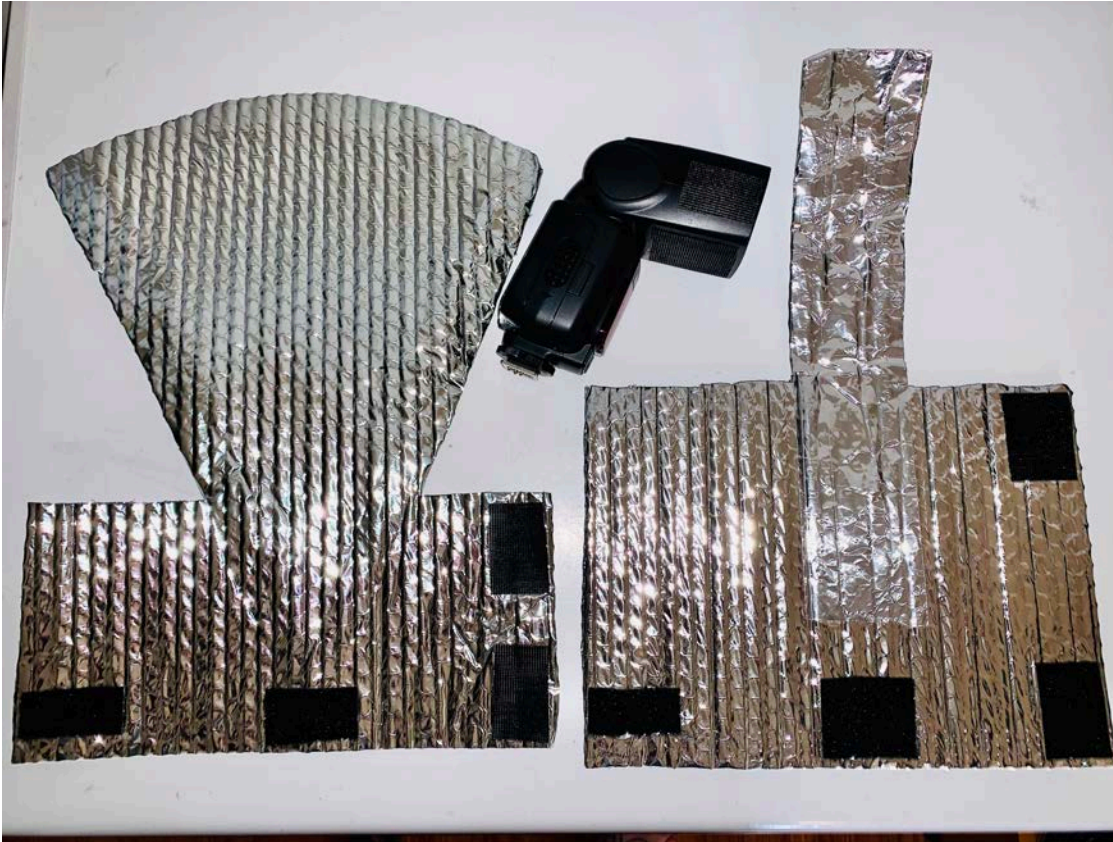
THE "DISH/SCOOP" SPEEDLIGHT MODE SIDE VIEW

As you can see below the speedlight faces backwards, towards the photographer and you pull up/out the speedlights reflector card (you can have it facing forwards, but you'd need to create a reflector card). This is a very simplex beauty dish setup type of light mod.



THE SCOOP MOD. AND THE MACRO-TENT VARIANT MOD.

As you can see below the image on the right is a variant of my “macro tent” mod but uses merely a bent ramp to feather light for macro use. There are a pair of wires taped on the backside so the ramp will hold its shape, the material used in both these mods is called reflectix insulation and you can get it at most hardware stores, its very lightweight, with bubble wrap in between sheets of Mylar. The mod on the left is a scoop shaped reflector, go to the next image for details.



THE SCOOP MOD.

As you can see below, the image the reflectix based scoop modifier has 3 wires taped to the back using industrial duct tape, a wire along either side, and one bent across the top so you can bend this scoop as you see fit; it weighs nothing and is very effective! Likewise it all folds flat in your camera bag.



FUJIFILM FLASH, LIGHTING, STROBE & SPEEDLIGHT TIPS & TRICKS

IN FLASH PHOTOGRAPHY YOU HAVE TWO SHUTTERS ULTIMATELY!

This is also why light meters tell you how to adjust your aperture, not your shutter speed for flash photography. Why? Depending on your lighting ratios between ambient light and flash illumination, in most all flash photography your cameras shutter speed becomes (in darker situations where most of the light is flash illumination) nearly irrelevant because no matter how slow or fast your shutter speed, the speedlight burst of power is many magnitudes faster and is the deciding factor in freezing the action, if any, of the shot. This is also why if a room is 90% dark, roughly, and you fire a flash and had intentionally set your shutter speed to 1 second, your subject would still be sharp and frozen, since the primary factor for freezing movement was the (depending on power output and T1 duration time of the flash) the 1/15,000 of a second or faster flash burst.

ALL HAIL THE XENON TUBE! LORD OF ALL PHOTOGRAPHY. MASTER PROBLEM SOLVER. WOEFULLY UNDERUSED BY MOST PEOPLE! SHAME & DISGRACE UPON ALL WHO DO NOT REVERE THE XENON TUBE!

Sorry, a little dramatic humor there. Seriously though the ENDLESS problems fixed by, and saturation gained by the use of a Xenon tube device is the almighty king of photography rendering. **Just because you can saturate the sensor without a Xenon tube device (strobe, speedlight) and get correct exposure means nothing!** This is like saying bread and water is enough to keep you alive! Well sure, but who the hell wants to do that?

Image fidelity ('microcontrast') is brother to ALL flash photography, so too it is stop motion in low light situations. When its dark (say 30% of the shot is ambient lighting or less) flash duration becomes the TRUE shutter speed, not the cameras shutter speed which might be very slow. Dynamic range compression of the shot with flash photography is a huge boon for ALL backlit situations, also to overthrow nasty lighting on interior shots. There is literally almost EVERY benefit imaginable from flash photography!

People unfortunately today are obsessing about how great the low light high ISO performance is on their cameras, as if they were proud to take ambient light photos of black cats at the bottom of coal mines at midnight! No matter HOW advanced the sensor or technology becomes, there is ZERO replacement for TRUE sensor saturation with flash photography. **LIKEWISE, ALL ETTR WITH FLASH PHOTOGRAPHY IS 1000X SUPERIOR TO ETTR WITH AMBIENT LIGHTING. ALWAYS WITHOUT EXCEPTION.** From a technical standpoint that is, if you want a gritty low light shot and that's your vision, that's fine, its all correct IF that's what you want the shot to look like.



TWO UNITS TO DO 95% OF EVERYTHING?

I am asked this all the time, on the cheap, what is the bare minimum (not counting light mods for these lights, softboxes, dishes, umbrellas etc.) strobe units by which one can shoot almost everything? Easy to answer, that would be a Godox 685 and Xpro trigger, & secondly a Godox AD200 (which also is controlled by the same Xpro trigger). This of course as said, does not include extra batteries and power packs (for the 685) and light mods, and stands etc. for these, but the CORE UNITS. Those two core units together with trigger would be approximately just under \$500.



MEET PHIL FLASH

Phil Flash (ROFL) says almost ALL images created are SUPERIOR with Phil Flash (fill flash). He says countless fools think you don't need a speedlight when you have tons of ambient light, but in fact you do. If you don't take Phil Flash's advice he's going to show up at your doorstep sporting a pair of knuckle-dusters and get medieval on you.



BUY IT, LEARN HOW TO USE IT, & EMBRACE IT!

I get asked all the time about how to use the Xpro Godox trigger and 685 speedlight but I must protest a bit and ask that people download and read their user manual for same on Godox website at:

<http://www.godox.com/EN/Download.html>

However, that being said, I did capitulate and make a 2-part video on how to use your Godox speedlight and Xpro trigger here:

<https://www.youtube.com/watch?v=JircYRw8ucA>

and part 2: <https://www.youtube.com/watch?v=FJ3lovdmGw4>

The one thing that scares most all new, intermediate and even more photographers is using flash photography, the how, the when and so on. However the fastest path to learning the speedlight is failure honestly, and only a day or two worth of failure. When you have the time, go around using your speedlight and trigger on anything and everything, and learn what caused overexposure, or under, and about sync speeds, HSS and the limitations of HSS. 95% of professional photography IS flash photography for many reasons, namely sensor saturation and dynamic range compression between ambient and subject but much more than that.

A cheap camera with a speedlight is far more useful and powerful a tool than an expensive camera and lens with no lighting. The Godox 685 and Xpro trigger are only \$180 in total and the best purchase you will make for your Fujifilm camera. Photography on the side of the gear is a system, not just camera and lens. Lighting is all-important.

The single best investment in your time and money is absolutely the purchase of a speedlight and trigger for your Fujifilm camera and spending a day or two failing with it, learning what you did wrong, and very quickly growing in confidence in how to use this incredibly important tool. The best part of anything is control over something, rather than being at the mercy of something, and when you are at the mercy of ambient lighting, this makes photography quickly miserable and frustrating, low tonality unsaturated ambient lighting shots gets old, and you spend all your time chasing great light rather than popping in 4 AA batteries and MAKING GREAT LIGHTING!



SHOOT THE AMBIENT, RAISE THE FLASH TO MEET IT. LEARN “EXPOSE & RAISE”

Everything is about dynamic range and lighting ratios (which is why light meters are still so useful). The best flash photography is flash that doesn't appear to have been used in the shot. Everyone has encountered horrific backlit situations where even the best dynamic range camera would be crushed to expose correctly. People know they need flash but they don't know what to do. They want to shoot wide open, but even at the lowest ISO this is a problem since their sync speed is only 1/250th (in most cases) and that speed is insufficient to shoot wide open, and further still HSS is far too weak to shoot at any distance much past 15+ feet...and by the way this is why hypersync and leaf shutter cameras are so important!

The very same reason I shoot all manual and TTL with flash compensation at events is the same premise you need to understand to conquer backlit problems. The answer is called **EXPOSE & RAISE**. Everyone can remember **EXPOSE & RAISE**,...but what does that mean? It means go all manual (be sure you use no shutters above your sync speed unless its close to your subject and you can do HSS) and set exposure for your ambient light, if you need to take a test shot to dial that in, fine. But what about the subject that is now all in shadow with muddy nearly-unrecoverable underexposure? Its simple, you now RAISE your second layer (lighting ratios!) of light from your flash or strobe to fill (as you see fit) to compress the dynamic range such that now you have the shot you want with perfectly exposed ambient illumination and plenty enough light to saturate and “pop” your subject. **EXPOSE for your ambient, THEN you RAISE YOUR FLASH ILLUMINATION** such that instead of a ratio of 10 to 1 ambient/background and subject (as backlit), you have a ratio of 1 to 2, or 1 to 1, as you deem it for the composition. This also makes post production so very easy to finish.

Now instead of stressing about shadow recovery in post production at the computer you have tons to work with and make it look however you want. What is flash really for? Exposure? Yes, kind of, but its really about saturation (“pop”, i.e. image fidelity) and dynamic range compression. No camera on earth can work with crazy lighting ratios, something is either lost or clipped if you go down that road.



WHY LED LIGHTING FOR PHOTOGRAPHY BOTH STINKS, & IS A REALLY BAD IDEA

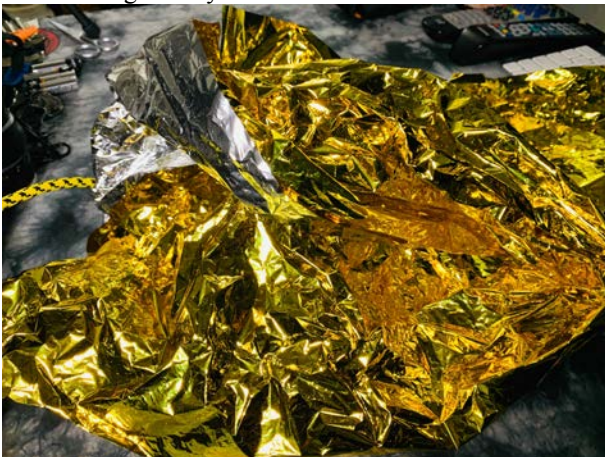
I get asked all the time about LED panels, since its popular now for lazy people addicted to WYSIWYG to use LED panels. Firstly, there is no extremely helpful sensor saturation with a LED panel. It takes an LED panel a near eternity to do what a speedlight can do in 1/20,000th or so of a second. LED is just additive ambient illumination, and it certainly does not help you dial out the ambient to your liking, since it is just MORE of the same ambient! ETTR and true deep sensor saturation is impossible with an LED panel.

Importantly there is no stop motion ability with an LED panels. Color balance issues are a problem with most (90+%) LED panels, but never with a xenon tube flash (speedlight, strobe etc.). LED panels are designed for video work, but greedy LED panel makers wanting a broader market started promoting them for photography also. The MOST expensive LED panel is far worse for photography than the MOST inexpensive speedlight! Do not buy into the hype and lies of fools trying to sell you LED panels for photography.



BOKEH BLANKET MAGIC!

This is the fast and easy bokeh background for interiors, head shots, product, etc. Go on Ebay and buy some “space blankets”, which are very thin Mylar emergency blankets, but get the ones that are gold on one side, and silver on the other. \$4 each, what you do is crumple them up 3 or so times very tightly, undo them and hang there wherever as a background, and they’ll make the most amazing bokeh background you’ve ever seen!



DIY IS PROFESSIONAL, JUST LISTEN

People usually think they can buy everything they need and DIY is some form of “broke person option”, however this is wholly untrue for photography and lighting mods. The best photographers on earth have had to create unique light mods even in studios with all the lighting gear you could ever imagine and hope for just laying around. Why? Because all the necessary things for bounce, diffusion and more cannot all be bought. Every major photography studio worth its salt contains piles of construction gear for making DIY light mods, despite having a massive fortune in strobes, octaboxes etc. laying around. 90% of product photography setup looks like an arts and crafts fest in a high school class.

With plastic sheeting you can get from any hardware store (used for making signs), genuine ducting tape, which is real aluminum with a sticky back, a roll of industrial velcro, a laminating machine and some art supply store translucent tracing paper you can make a fortunes worth of light mods for just \$1 or \$2 each, and make things you cannot buy for any price from retail photography stores.



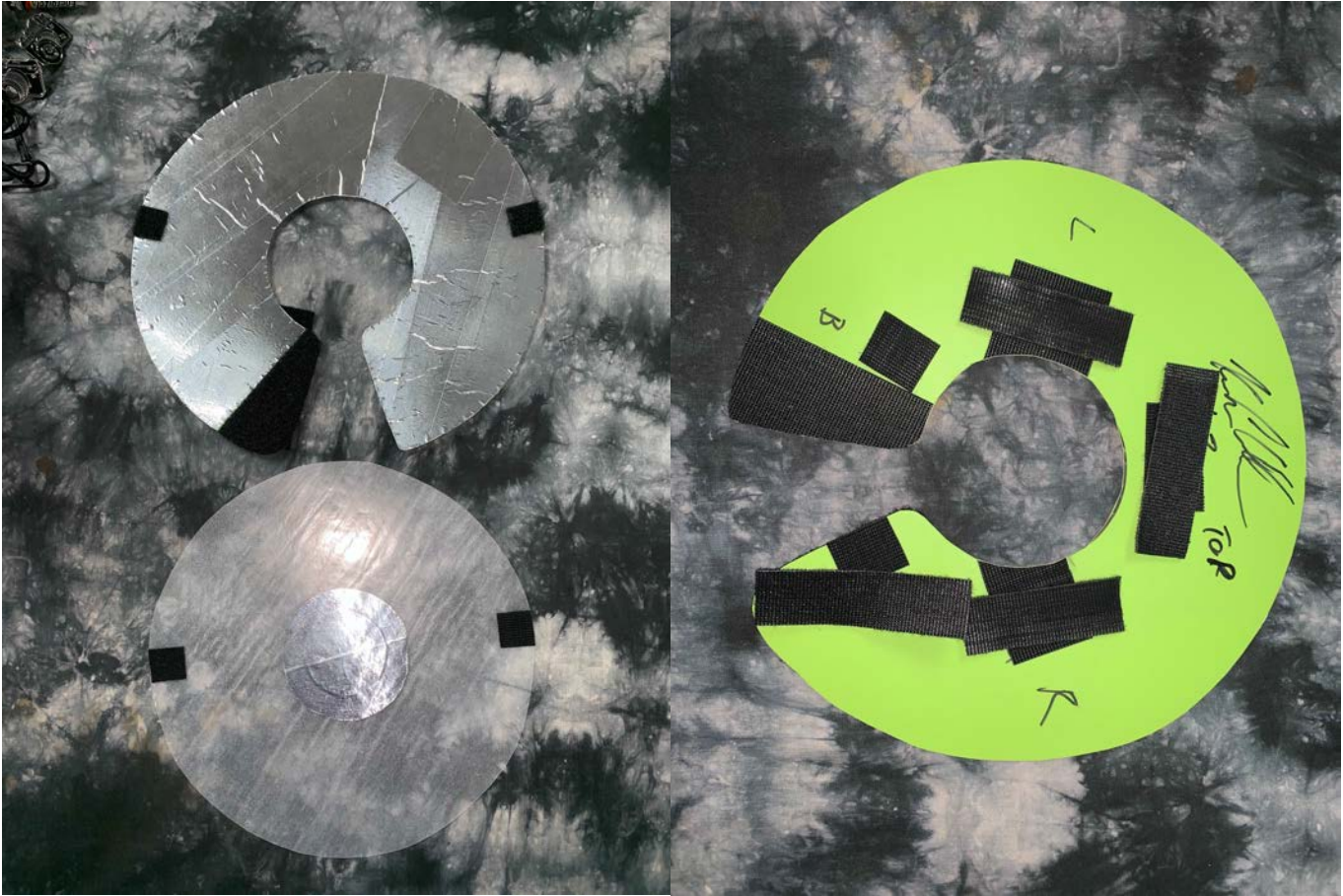
NEW GODOX V1 WITH ROUND HEAD

Godox has a new slightly more powerful V1 speedlight with magnetic head which is perfect for using the Godox AK-R1 kit seen on the right, which is the same Godox AK-R1 kit designed for use with the round head for the Godox AD200. Magnetic snap and go easy use! Barn doors, honeycomb, dome head, filter holder, snoot & more. The V1 comes with rechargeable lithium battery and is now my favorite speedlight, however it does cost a good deal more than a 685 Godox speedlight.



KEN WHEELER'S COLLAPSABLE BEAUTY DISH

To make the collapsible DIY beauty dish invention below which is perfect for the GODOX V1 or the bare bulb head for the AD200 GODOX, you need tracing paper, genuine ducting tape (hardware store), some industrial Velcro strips and sticky backed industrial Velcro and a thin plastic yard sign. You will also need to laminate the tracing paper as you see below. This is an incredible light mod DIY creation. I've made 3 of them myself!



ALL ABOUT THE HONEYCOMBS!

I would never travel without my honeycombs next to my speedlight(s). Period. Lighting is the most important step, but more important than that is lighting CONTROL. You can vomit light all over things, but control is where it's at. On the left is a shallow 1" honeycomb, perfect for most things and prevents spills. On the right is my favorite honeycomb, made of 5" black (must be black!) straw bundled together and with Velcro strips for attaching to my speedlight heads for maximum control.



ALIEN BEES ABR800 RINGFLASH IS THE #1 MONEY MAKING LIGHTING DEVICE

It might be big and ugly but this is the single best lighting device for printing money that exists. It does require your patience to perform a couple tiny modifications, such as adding Velcro to allow a neck strap, adding a \$20 video grip and making a Velcro retention modification to the camera base plate. \$30 of modifications in total. You should go to the flickr group for this light mod to see the unique light it throws on the subject. Further more there is a 30" moon unit (a sort of huge beauty dish) that is also made for the ABR800. 6 stops of variable power from 10WS to 320WS. Along with a vagabond mini lithium power back sold by PaulCBuff this unit is utterly portable and very powerful! I even designed a macro lighting mod to use with this unit. It's the pinnacle of amazing versatility.

As you can see there are two half-moon xenon tubes at the front. There is a light stand mount on the bottom and it come with an umbrella reflector mod for mounting any size umbrella so you can use it like any other conventional studio strobe. It has 320WS of power.



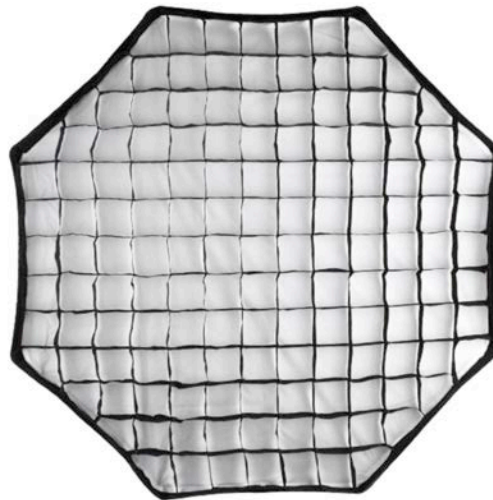
THE BEST OPTION STUDIO STROBE, THE PAUL C BUFF EINSTEIN UNIT

The single best do it all studio strobe and the best customer service on earth is the PaulCBuff Einstein unit. Options between 2.5WS to 640WS with tight color control, action stopping power of 1/13,500th second. Full function and easy to use radio control units are amazing and making changing both modeling light and output so easy. I have four of these units, but one is plenty enough to make anyone happy. Now PaulCBuff has distribution, sales and service in Europe! For an even smaller entry unit, the Digibee DB800 is the best option with 320WS of power and a very powerful LED modeling light.



THE PAUL C BUFF OCTABOX & GRID

While I own a pile of softboxes and they do have their unique uses and attributes, nothing is more universally useful than an octabox. Paul C. Buff has 3 different sizes, however my favorite is their medium 47" octabox, and since lighting is only half the picture, control is the other half, you need to get the grid to keep out spill. Control is everything. Not shown is the front diffuser panel these octaboxes come with. These are not rod insertion units, meaning you have to put them together every time you want to use them. People immediately understand why the cheap junk on Ebay is so undesirable, they're a total pain to put up and down. These are very toughly made and assemble as fast as an umbrella with a patented design. Everyone should get a quality octabox for their studio strobe.



REFLECTOR HEAD LIGHT MODIFIERS

Not shown, but standard “bowl” or reflector heads have countless mods, such as snoots, barn doors and grids you can add to them, as well as gel holders for effect, especially backgrounds and hair lighting. The most important aspect of light is control and its utterly necessary to purchase honeycomb grids for your strobe reflector heads, these come in different degrees of control. Likewise too gels for gel holders that fit on the end of reflector heads. All of this can be found on Paul C. Buff’s website.

<https://www.paulcbuff.com/Light-Modifiers>



PAUL C. BUFF RADIO TRIGGERS & RECEIVERS

The CyberSync transceiver unit attaches to the Digibees or Einstein units and communicates with either the very simplex CyberSync transmitter that mounts on the hot shoe or the very advanced hot shoe mounted Cyber Commander (love it!) that lets you stay where you are and control power, and modeling light all via the commander. This saves a ton of time, not to mention there is a built in light meter on the back of the unit. The new CyberSense has a touch-slider control for power output and modeling and is a “halfway between” unit of the simplex transmitter and the Cyber Commander which can change countless levels on connected strobes. The Cyber Commander can also be used in stand alone just to adjust all the power and settings which is what I recommend, with it hanging around my neck. These are radio units only for PaulCBuff strobes.



CyberSync™ Trigger Transmitter 2

The CyberSync™ Trigger Transmitter mounts onto your camera's hot shoe to provide wireless firing.

\$59.95



CyberSync™ Transceiver

Forms an all-digital interface between the DigiBee or Einstein™ flash unit and the CyberSync™ Trigger Transmitter 2 (CST2) and/or the Cyber Commander™.

\$29.95



CyberSense

Simple 3-button slider remote for wireless control of up to four flash units!

\$79.95



PORTABLE POWER FOR YOUR STUDIO STROBE

Power! I have a pair of these lithium packs sold by Paul C. Buff, they're amazing and can go all day long in most cases, they are the size of a small loaf of bread. I have straps on mine for hanging off my shoulder with use with the ABR800 ring flash unit, but they can hang on a light stand and power your favorite strobe out in the field. Incredibly useful for everything, these pay for themselves overnight.



GODOX AD200 PERFECTION BETWEEN STUDIO STROBE POWER & SPEEDLIGHT PORTABILITY

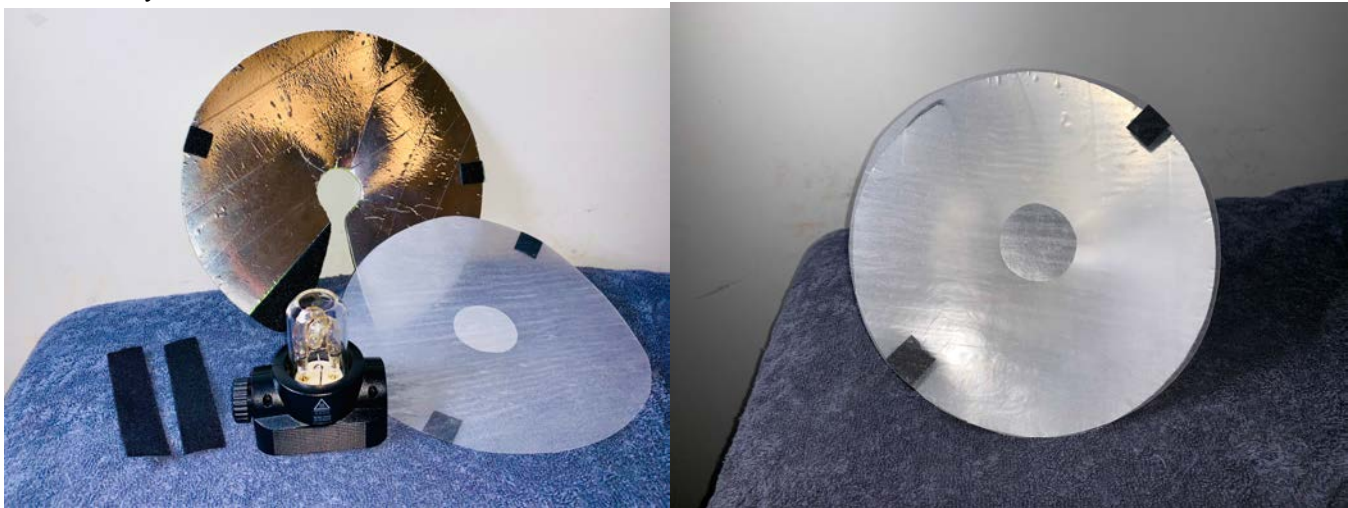
The Godox AD200 is the perfect middle-ground professional lighting tool, exactly halfway between a speedlight and a professional studio strobe. With 200WS of power (that's quite a lot) and fast exchangeable batteries, its an amazing unit, and also does HSS. It comes with two heads, at left you see the bare bulb head upon which you can make or mount countless different light mods. And at right the speedlight head with Fresnel panel.

At the back left not included is the bare bulb protector for travel use. At back is a barn door kit with included honeycomb grid for attaching to the speedlight head. With this unit (or more!) and a pair of speedlights, you can do 95% of all flash photography needs! Just remember to buy those accessories: round flash head, and spare batteries, & especially the head extension kit (see below).



GODOX AD200 DIY BEAUTY DISH. WEIGHS NOTHING AND COSTS \$3 TO MAKE

This is an example of a Godox AD200 bare bulb head DIY light mod that works so amazing. It weighs nothing, collapses totally flat and takes only 20 mins. and \$3 to make!



GODOX AD200 ROUND HEAD & ACCESSORIES

The Godox AD200 round flash head (a bare bulb xenon tube inside a miniature reflector dish with a diffuser plate at the top. This accessory head comes with magnets to attach it immediately to many different light mods that are sold in the Godox AK-R1 accessory pouch. See below image, it comes with filters, a snoot, barn doors, a magnetic honeycomb, a filter holder, a dome head and also a special diffuser. Really this round head for the Godox AD200 is a must buy.



GODOX AD200 CASE & EXTENSION CABLE A MUST BUY!

This is an absolute must buy for the Godox AD200! The XP-200 6 foot head extension cable and the Godox AD200 pouch called the “flashpoint pouch”. You can (I mounted a belt-clip ring on the pouch) take ALL the weight of the Godox AD200 and its battery and put it low, either on a light stand, or on your belt, and just have the head out wherever you want it.

Literally the Godox AD200 becomes its OWN light stand weight, and that’s awesome! The versatility of getting the head off the unit cannot be understated. The lighting options and putting these heads on the end of a quickstick or monopole with no real ultimate weight yet have amazing power, is unmatched!



GODOX AD200 LIGHT MOD HEADS FOR THE BARE BULB HEAD ATTACHMENT

The Godox AD200 dome diffuser, and the streaklight standard reflector, with the ability (at right) to add a honeycomb inside! There are many light mods you can buy for your Godox AD200 including different heads. The Godox AD200 comes with two heads however, the standard speedlight head and the bare bulb head.



GODOX AD200 NECESSARY ACCESSORIES TO MAKE THINGS EASIER

These are amazing units to use with your Godox AD200. On the left is a video grip you can attach at one of the two tripod screws on the AD200 unit, I also attached a carabineer so I can hang the head at the end of the extension cable off my belt. At right is the Impact QuickStik+ Telescopic Handle at the end of which is the Manfrotto Snap Tilthead with Shoe Mount that you can lock in the head at the end of the extension cable of the AD200! Amazing!



FUJIFILM TTL PINOUT CONNECTIONS ON THE HOT SHOE

Fujifilm hot shoe PIN connection point orientation is THE SAME as that for Canon. However this DOES NOT mean that you can use canon speedlights for TTL/HSS on a Fuji camera, rather TTL cables are extremely useful for NISSIN and Fujifilm EF-X500 speedlights, also too Godox. There are reliability benefits to using TTL cables and they're extremely useful for non-Radio equipped speedlights for getting the flash OFF THE CAMERA which is very important for lighting expression and angles, of which hot shoe mounted lighting is the most unflattering flash photography for portraiture and least capable for product photography, and especially for macro!! I recommend the Vello branded cables 6.5 feet minimum. 33' foot cables are also available.

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Vello Off-Camera TTL Flash Cord for Canon Cameras (6.5')

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VELLO



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- Coiled Cord
- Mounts to Flash Shoe
- Mounts to 1/4"-20 Threaded Studs

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★★★★★ Reviews: 168 9 Questions, 22 Answers

Compatibility: Canon

Canon Nikon Olympus/Panasonic Pentax
Sony Multi Interface Shoe Sony/Minolta

Length: 6.5'

1.5' 3' 6.5' 33'

1

QTY

\$32.95

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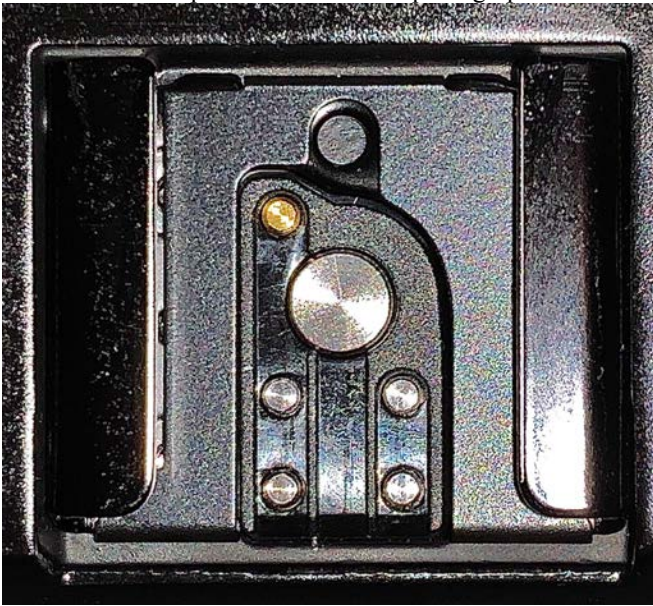
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UNDERSTANDING YOUR FUJIFILM HOTSHOE PIN CONNECTIONS

You DO NOT need to know what each pin goes to, but you should learn that each camera system has its own unique flash protocols and hotshoe pinout connectors and placements. Fujifilm actually copies the same pinouts but different communication protocols, of that of Canon. In the image below you can see the Fujifilm hotshoe connections, the top left gold connection is a power connector to give power to the EF-X8 tiny Fujifilm flash, and that pin is unique.

That BIG CENTER PIN in the middle is the SAME FOR ALL CAMERA SYSTEMS since (ROFL!) the stone age (well 99.9% of them anyway). It has the same intent and use by all camera systems, which is a command to FIRE! This is why you CANNOT DO TTL, or HSS with FlashQ triggers, Pocket Wizard radio triggers and ANY AND ALL triggers and oldie flashes that have ONLY ONE CENTRAL PIN CONNECTION! Period, there is no exception to this (however Hypersync is different and explained elsewhere). Those bottom four remaining pins control TIMING, Flash to camera signals, and camera to flash signals to QUENCH the flash when using TTL, and other communications depending on the complexity and nature of the flash, but essentially these four pins are for complex communications for timing between flash and camera, and vice versa! The top hole which is not silver, is a locking hole to hold the flash on the camera, and lastly the metal plate around all of these pins is the ground connection. There you go, now you know more about these pins than 99.99% of photographers!



EXCELLENT MACRO RINGLIGHT ON THE CHEAP!

You can create this with any speedlight for your Fujifilm system! Go onto Ebay and purchase (\$20 to \$40+) a microscope fiber optic ring light! These are made tough as hell and they work 100% pure gold (with no moving parts and nothing to break too!!) as a macro ring light. You will need some Velcro strips and a very cheap adapter ring of the right size to screw onto the front of your lens.

You will need to cut or drill out the correct sized hole in the DIFFUSER attachment for the front of your speedlight that came with your speedlight. Make sure you buy the correct size microscope fiber optic ring light that has a center hole large enough for your macro lens.



YOU CAN USE NON-FUJIFILM PINOUT SPEEDLIGHTS WITH YOUR GODOX SYSTEM REMOTELY!

If for example, you have a Godox Nikon speedlight you CAN use this 100% for TTL and HSS and everything else IF you use it remotely as operated by the XPRO trigger (and the older radio unit) for Fujifilm by Godox, this bypasses the pinout connection on the bottom of the speedlight which are only for direct TTL communication between the camera and the speedlight. The same goes for all Godox speedlights, no matter which camera system they're made for, all will work 100% with your Fujifilm camera so long as they are used remotely via radio trigger from one of two different Godox radio triggers such as the XPRO or the earlier transmitter.



BEST SPEEDLIGHT TO PURCHASE & WHY

On the left is the Nissin i60a and its radio transmitter unit, in the middle is the GODOX 685 and its Xpro trigger, on the far right is the Fujifilm (made by Metz) EF-X500 speedlight.

The Nissin i60a is currently \$340 and \$90 for the Air1 commander, for a total of \$430

The GODOX 685 is \$110 and \$70 for the XPRO trigger, for a total of \$180

The Fujifilm EF-X500 is \$375 and is optically slaved, so no radio option is possible.

The two advantages, despite the high price on the Nissin i60a is that its very powerful yet small and has a great no-look flash compensation wheel on the back that you can adjust without taking your eye off the viewfinder. Alas the AF assist on the Nissin speedlights does NOT work on the Fujifilm systems!

The Fujifilm EF-X500 has, alas, a nasty white-light for AF-assist that will get you punched in the face using it in dark shooting situations! Further more there is no option for remote use unless you buy yet ANOTHER EF-X500 and optically slave it, with line of sight only. However the EF-X500 has the best consistent HSS exposure compensation of any of these speedlights herein mentioned.

The GODOX V860 (not shown) is \$160 and has a fast-recharge internal lithium pack for faster recycle times, the downside of this is the necessity of packing and buying spare VB-18 power packs at \$40 each. However the V860 is essentially the 685 with a fast-cycle internal power pack which eliminates the need for buying an external GODOX PB960 power pack for ultra-fast recycle on the speedlight capacitor. (See power pack info below). Also too the AF assist cross hatch from the Godox XPRO trigger is absolutely wonderful and so useful.

Honestly you should not even dare hesitate to purchase the GODOX unit (either the 685 or 860) and the Xpro trigger! This is one rare time where it's not even up for debate, get it, period!



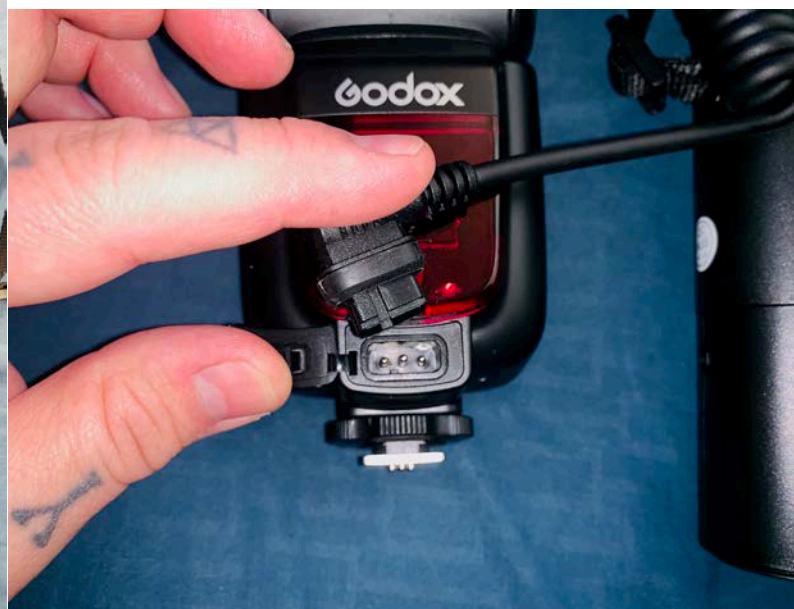
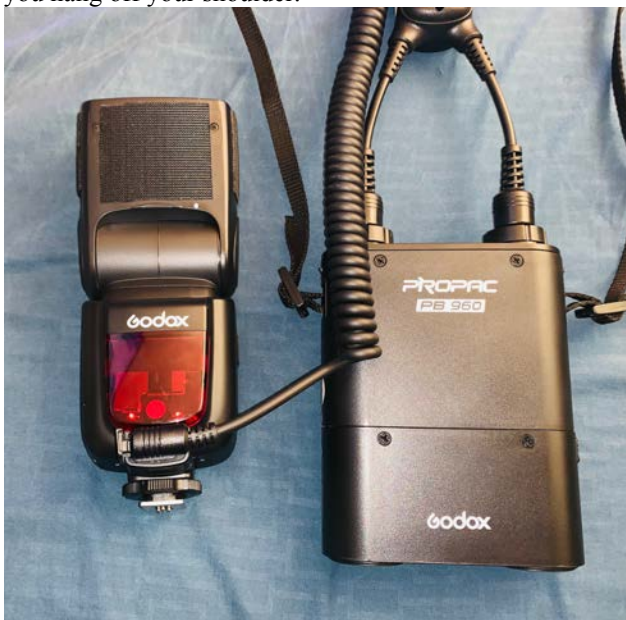
ALL EVENT & WEDDING PHOTOGRAPHERS NEED A SPEEDLIGHT POWER PACK, PERIOD!

Regardless of the speedlight you're using, all the AA batteries in the world will NOT recycle the speedlight capacitor fast enough for events and weddings, or photojournalism. You must have and use a power pack. You still need the AA batteries to power the brain of the speedlight, but a power pack near-instantly recharges the speedlight capacitor for fast follow up flash shots. Quantum turbo packs are the best, but they're \$650+ compared to \$110 for Godox PB960 packs. Either one recycles the speedlight just as fast, and the Godox has the advantage of having removable battery packs attached to the bottom.

There are 4 different kinds of Godox cables, one for Canon, Nikon, Sony, & Metz, the IMPORTANT FACT is that the Godox speedlights themselves use the CANON CABLE which is part: PB-CX

Unless you buy a package deal, the Godox PB-960 does NOT come with any cable needed for using it!

As you see pictured below the cable attaches under the flap on the front of the speedlight. The power pack comes with a strap which you hang off your shoulder.



GODOX DB-02

The PB-960 Godox power pack has 2 banks of internal batteries, and for even faster than fast speedlight recycle time, the use of the DB-02 shortens that by making a splitter 2 into one for attaching the PB-CX cable which then attaches to the Godox speedlight



SPEEDLIGHT VELCRO!

There is a very good reason you see Velcro on the heads of all professional photographers speedlights, for attaching light mods, most of which are DIY light mods. The best speedlight mods cannot be bought, rather they're made very cheap and simply at home.



FLASH Q TRIGGERS

These cute little triggers, no bigger than dice cubes are amazing and perfect for use on the X100F, or X-T30 etc. for firing older cheap speedlights and other lighting devices. They're powered by watch batteries and the one on the left goes on your hot shoe, and the one on the right goes on the base of some speedlight. No HSS or TTL is possible, they are single pin-contact fire only devices.



POCKET WIZARD. STILL THE INDUSTRY STANDARD

While some complain about their price, these are the go to standard for remote transceivers, which can either fire speedlights (mostly redundant now) but especially studio strobes. Further more they are long distance transceivers, very tough and well made. Their reliability is the standard for all others.



FIRST CURTAIN, SECOND & AUTO FP (HSS) HIGH-SPEED SYNC

Learn well WHEN and WHY to set 1st, 2nd curtain, or HSS (AUTO FP) on your Fujifilm system with the appropriate speedlight and settings. 1st curtain the flash fires immediately after the shutter opens which is what you should use most of the time. 2nd curtain the flash fires just before the shutter closes. HSS/Auto FP is pulsed light so fast you cant see it pulsing, but covers the MOVING SLIT (of the 2 shutter curtains) as it travels from the top to the bottom of your sensor. Its very important you learn these settings and when to use them without even thinking about it!



TTL WITH FLASH COMPENSATION SO INCREDIBLY USEFUL!

The best option for event photography and weddings also is all manual on your camera and TTL flash photography with flash compensation for compensating for changing reflectance values.



AF ASSIST

Don't forget for darker situations to turn ON (if appropriate and allowed) your AF assist light. In the case of the Godox XPRO trigger, this works wonders and is a great reason to ALWAYS keep your XPRO trigger on your hot shoe for AF assist and focus



FULL CONTROL GO MANUAL!

For macro & portraiture, go all manual on your speedlight. There is a reason TTL doesn't exist for the most part on ALL expensive studio strobes, because nobody needs or wants it for use on same. Additionally light meter use to determine lighting ratios and what to adjust necessitates shooting all manual. Be a control freak and use manual flash output as often as possible. Some things dictate TTL use, such as sports, action, events etc., but for everything else, manual is really the best option.



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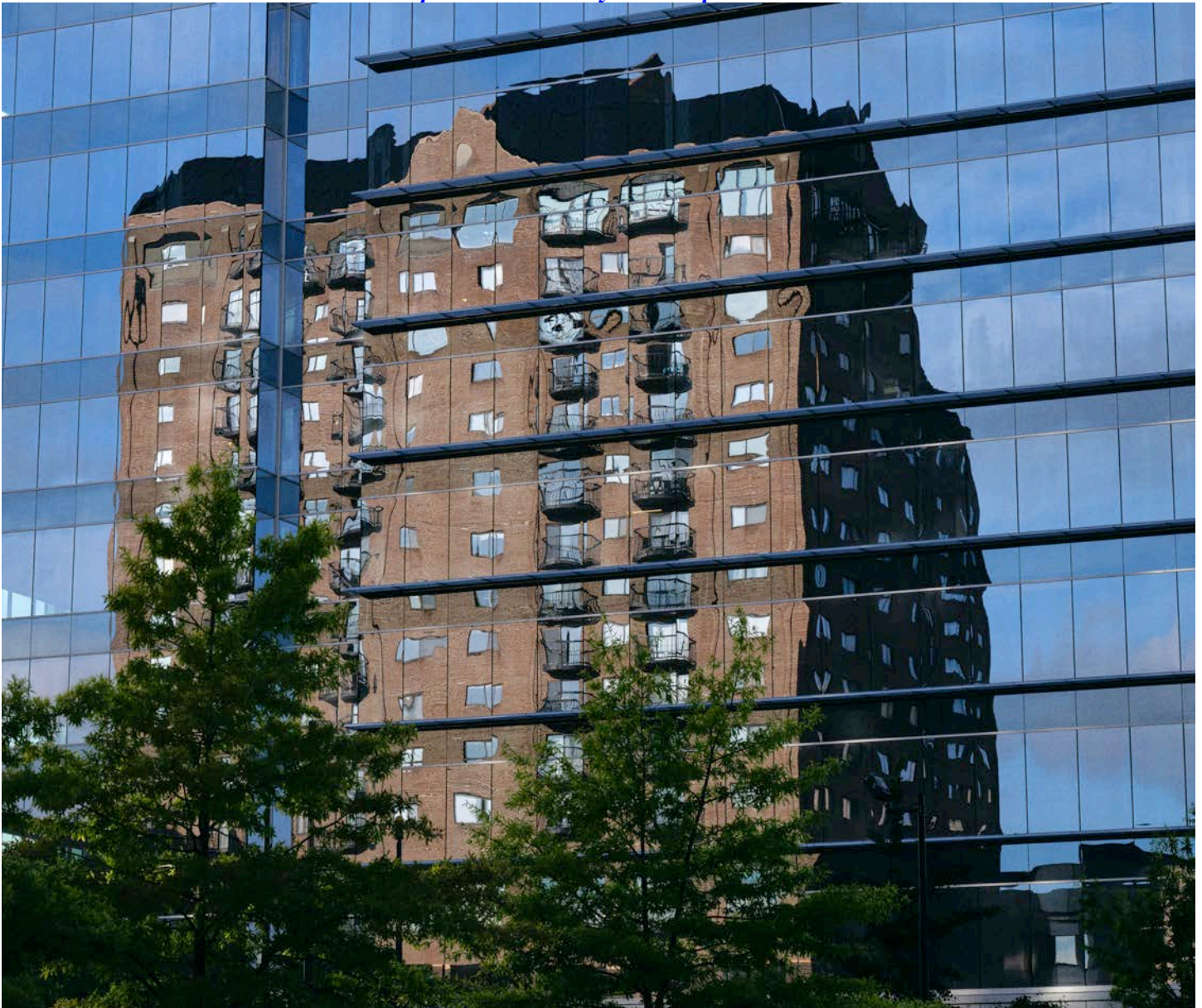


MAY YOUR FUJIFILM CAMERA REFLECT YOUR VISIONS, DESIRES & PASSION FOR PHOTOGRAPHY

I purchase all my own Fujifilm gear myself with no help from Fujifilm Inc. My position about this gear is built upon a tremendous experience with camera gear, both use, ownership, and repair of cameras for a very long time, including lenses. I could see great things on the horizon for Fujifilm because I could see what they are doing, and saw incredible potential for them unlike the sleeping giants of Canon and Nikon.

A mere 4 years ago it was generally the word “oh yes, I’ve heard of Fujifilm cameras”, to today’s word of “Oh my, Fujifilm is killing it, I own two etc. Fujifilm cameras, I love them!” I put my money where my mouth is and I am extremely hesitant to recommend anything, but Fujifilm is doing almost everything right, whereas everyone seems to be doing most everything wrong. I stand behind Fujifilm support, service, and quality and put my money into it. This book is free because I really do love Fujifilm cameras that much and also of course, because I want to be helpful.

ALWAYS REMEMBER: “Saturate your sensor when taking the photo, & expose as you want your image to present while at your computer”



THE END

